Special Issue on CALL

No. 5

AWEJ July-2019

www.awej.org
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Exploring the Effects of Interactive Response System (IRS) in an EFL Grammar Class

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Abstract
Digital interactive language learning has become increasingly prevalent and significant in educational settings. It is challenging to apply collaborative learning methods because students tend to engage passively with traditional methods of lectures. Several studies have suggested that digital interactive technologies such as Zuvio Interactive Response System (IRS) have been applied to increase learning motivation. However, related studies on using IRS in English a foreign language (EFL) classrooms are limited in Taiwan, especially from learners' perspectives. The aim of this study was to integrate an interactive response system into an English grammar course and to explore whether the assistance of this digital tool could promote students' learning motivation and whether it could facilitate a student learning environment. Based on the research background and rationale, the following research questions were investigated: (1) How does the use of the IRS influence students' perceptions toward their learning attitudes? (2) How does the use of the IRS influence students' perceptions toward learning contents? (3) How does the use of the IRS influence students' perceptions toward classroom interaction? An experimental design was employed. This research was conducted in this one-semester project to uncover 49 EFL learners’ views of IRS in a grammar class. Zuvio IRS and the British Council Grammar Snacks videos were utilized in this experimental instruction. A questionnaire was administered and consisted of demographic information, Likert scale questions, and open-ended short-answer questions. The results showed positive attitudes for learning with Zuvio IRS and videos, and the interactions between students and the teacher that mediated by Zuvio IRS. Future studies might explore learning outcomes of students from different majors, implement results of IRS studies into curriculum and instruction, and create more appropriate questions into IRS.

Keywords: EFL in Taiwanese context, grammar videos, interaction, interactive response system, motivation

Cite as: Wu, C. P. (2019). Exploring the Effects of Interactive Response System (IRS) in an EFL Grammar Class. *Arab World English Journal (AWEJ) Special Issue on CALL (5).* 3-17
DOI: https://dx.doi.org/10.24093/awej/call5.1
Introduction

In the past decade, many studies on teaching and learning in different educational contexts have shown significant concerns in the use of interactive technologies to promote interactions between teachers and students. Students' engagements of classroom interaction play a crucial role in language classrooms. There are various technologies and digital tools in recent years. Interactive response systems (IRSs) are one of the common digital tools for teachers' employment in the classroom. An increasing number of research papers concerning the application of such new interactive response systems such as Clickers or Zuvio have revealed that the IRS has positive effects (Heaslip, Donovan, & Culle, 2014; McDonough & Foote, 2015; Wang, 2018).

On the other hand, other studies have some issues that the disadvantages and inadequacies of IRSs (Aljaloud, Gromki, Billingsley, & Kwan, 2015). For teachers' perspective, how to integrate technology into a classroom to enhance students' engagement, increase their learning motivation, and facilitate learning environment should be considered. In this study, the researcher wanted to discuss an IRS could enhance teacher-student and peer-to-peer interactions in a technology-mediated language classroom. Instructors could pose questions to different formats (e.g., true/false, multiple choice, short answer) and promptly collect student responses and display the results on projection screens. Then instructors could take opportunities to elaborate the answers or give feedback (Denker, 2013).

Many relevant studies describe IRS implementations for various disciplines like physics and chemistry (Chu, Lu, & Wann 2009; Lin, Liu& Chu, 2011). These studies have shown positive feedback after using IRSs, and students are more willing to interact with instructors and classmates. Past studies focused on the science fields; also, the majority of studies on the application of IRSs have been limited to traditional IRSs (e.g., Clickers or Kahoot). An online interactive system developed in Taiwan, Zuvio, is a cloud-based system which students can interact with their instructors and peers through any Internet-enabled hand-held device, for example, a smartphone or tablet computer. To date, not many studies have made attempts to discuss the effectiveness of using Zuvio to assist English learning, especially grammar class. Consequently, the purpose of this study was to integrate an interactive response system into an English grammar course and to explore whether the assistance of this digital tool could promote students' learning motivation and whether it could facilitate a student learning environment. Based on the research background and rationale, the following research questions were investigated: (1) How does the use of the IRS influence students' perceptions toward their learning attitudes? (2) How does the use of the IRS influence students' perceptions toward learning contents? (3) How does the use of the IRS influence students' perceptions toward classroom interaction?

Literature Review

Sociocultural Theory

The sociocultural theory is used to describe and understand how human learn through different social means and interactions. Instruction, therefore, is designed to be a collaborative event for students to learn in the zones of proximal development (ZPD). Furthermore, social networking is implemented into various cooperative learning pedagogies that contradicts and challenges traditional educational theories, especially those language acquisition theories from Chomsky (Lin, 2011). Because of the nature of learning cooperatively through using technologies, the
sociocultural theory rooted in Vygotsky's approach is essential in terms of knowledge constructed in social interactions (Daniels, 1993). The sociocultural theory is used in this study for its theoretical framework, research design, interpretation, and discussion.

Mediation
Mediation is the central concept of sociocultural theories (Lantolf & Thorne, 2006, p59). For Vygotsky, mediation means "acting indirectly through something" (Cole, 2003a). For mediation, Vygotsky makes a cognitive justification between them by saying that "… the use of signs and tools using the schema … shows each concept subsumed under the more general concept of indirect (mediated) activity." (Vygotsky, 1978, p. 54) Vygotsky thinks that mediation happens when tools and signs work together to perform an indirect function (Vygotsky, 1978).

Based on Vygotsky's notion of social interaction in human cognitive development, learning is socially constructed. The sociocultural context affects the use of tools and signs to construct the meaning of new knowledge.

Grammar Instruction for L2 students
Grammar learning is different from a native speaker than a second language (L2) student. Native speaker students have learned a great deal of grammatic knowledge through daily life experiences before entering formal education. Since all the grammatical skills are internalized and become natural to them, they do not aware of it until they are asked to make it externalized. Vygotsky describes this process as "… children are forced to create the situation or – more accurately – to represent it in thought" (Vygotsky, 1978, p. 203). In other words, grammar learning for native speaker students is a cognitive process moving from daily life concepts into scientific concepts. In addition to the concept formation process, Lantolf & Thorne (2006) depict Vygotsky's argument that "… instruction in writing and grammar does not depend on the developmental readiness of school children; on the contrary, it leads to the very development other approaches assumed to be necessary for learning to occur … instruction leading development" (p. 293).

Moreover, this development is the process of "how language in general functions to serve human communicative needs and of how various subsystems (i.e., phonology, morphology, syntax, semantics, pragmatics) are organized" (p.293). Vygotsky describes the relationship between development and learning: Developmental processes do not coincide with the learning process. Instead, the developmental process lags behind the learning process; this sequence then results in zones of proximal development. (Vygotsky, 1978, p.90)

In terms of L2 students' grammar learning, on the other hand, is an opposite process than those native speakers' experience. In other words, L2 student is consciously taking the rules and functions of grammar and try to apply it in daily lives. It is a process of from scientific concept into daily life concept in Zone of Proximal Development (ZPD).

Zone of Proximal Development (ZPD)
Language learning, based on the concept of mediation and ZPD, is processed by using culturally constructed means. According to Lantolf & Thorne (2006), “with respect to symbolic artifacts, language activity, speaking, and writing, is the primary, though not exclusive, mediational means
humans deploy for thinking” (p. 79). Vygotsky introduced the ZPD for this mediational process in the concept formation. Vygotsky (1978) calls the difference of development between without and with adult assistance as the zone of proximal development and describes:

It [the zone of proximal development] is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers. (1978, p.86)

With this analogy, grammar learning for L2 students is not merely a proactive acceptance from rules of "the other," but an active procedure of concept formation from language mediated intra-psychological speech intertwined with inter-mental communication in the form of interaction with peers and teachers. The grammatic awareness is already there but trying to make it useful in a more casual way, which can be actualized in the process of classroom interactions in a collaborative perspective (Gutiérrez, 2006). The computer as a mediational tool in the processes of collaboration based on the understandings of the sociocultural theory, the implications of technology was utilized and integrated into learning. As part of the computer-mediated communication, pedagogical implementation of IRS can be very meaningful.

**Interactive Response Systems in Classroom**

**The framework of IRS**

The Interactive (or instant) Response System (IRS) is designed for increasing students’ interaction for better learning. As early as 1991, Eric Mazur from Harvard University designed the “Flashcard” system for students to respond to questions and applied to peer instruction. As technology advances, wireless or mobile devices are used nowadays to collect and calculate students’ learning performances; therefore, teachers can adjust their teaching methods and progresses accordingly. In recent years, learner-centered education with Flipped learning is one of the applications that incorporate the IRS. (Chu & Yang, 2017, p.619)

**Application of Zuvio in L2 Learning**

Zuvio is one of the Interactive Response Systems used in classroom settings. As described in the official website saying it as a powerful classroom supportive system that prepares teachers for test preparation, interaction, and statistics. A teacher can prepare different types of class questions ahead of time according to the course progress, post questions for students to answer, taking attendance, or ask questions, and collect answers from students for further discussions, instructions, and gradings (Zuvio, 2019). As Chu & Yang (2017) describe, Zuvio is “an online teaching and learning platform which provides a variety of assessment types, including the functions of an instant-response system (IRS)” (p.620). Because students can work in groups and solve problems together with its IRS functions, the Zuvio IRS can increase students’ learning motivation by using its online peer assessment system (Wang 2016, Chu & Yang 2017).

**Methodology**

**Participants**
The participants were 49 Taiwanese college students who took English Grammar as a requirement at a four-year university in Kaohsiung, Taiwan. 80 % of all the participants were freshmen. 15 %
of juniors, and 5% of exchange students. 75% of the students were female, and 25% male students. The majors of the participants are mostly Applied English (80%), International Business (15%), and Mass Communication (5%). This particular course was a required one for freshman students with two credit hours per week. Participants studied English for at least eight years. The average score of practice Oxford Practice Grammar Intermediate Diagnostic Test that the participants took as a placement test was 55 out of 100, which shows that they have an intermediate level of English Grammar proficiency. Most participants did not have experience of using an interactive response system in their high school English classes.

**Instruments**

*Diagnostic Grammar Test*

This diagnostic test contains 100 multiple-choice and write-in questions based on grammar points covered at the Intermediate level such as verbs, passive voice, adjectives and adverbs, and relative clauses. Oxford Practice Grammar Diagnostic Tests have three levels, basic, intermediate, and advanced. The researchers adopted the intermediate level because most students learn English grammar for six years. The reliability of this test was Cronbach alpha .681.

*Zuvio IRS*

Zuvio is an Interactive Response System (IRS) developed by a Taiwanese team in 2013 (see Figure. 1). The purpose of this system is to increase students’ learning motivation, improve teaching quality, and facilitate digital education (Yan, 2014). Zuvio IRS contains various features and functions for both teachers and students. Teachers could design different types of questions like the multiple-choice, short answer, and open-ended questions. Besides, teachers divide students into different groups to complete questions and present students’ responses in class. Grading rubrics could be set in advance before the class, and it is allowed to ask students to give comments for their classmates. For students’ platform, they can answer questions instantly, peer-evaluate classmates’ responses, and have some interactive discussions with teachers and classmates. Meanwhile, students could use digital devices such as smartphones, computers, or tablets to answer questions immediately. After class, students could also read the previous exercise to review the course.

*Figure 1 The Interface of Zuvio IRS*

*Course Materials*

British Council has valuable online materials such as puzzle, games, and videos that can be available for beginners or intermediate learners. Grammar Snacks videos (see Figure. 2) were
chosen for this course, and students were required to watch videos after learning grammar points. These videos show the grammar being used in natural conversation. After watching videos, students read an explanation of the grammar point and do the exercises to check the understanding of grammar points. The research prepared ten multiple-choice questions for each grammar point, and the students were required to answer the questions via the platform of Zuvio IRS in class.

Figure 2 The Interface of British Council Grammar

The questionnaire with open-ended questions
A 5-point Likert scale questionnaire of 39 items was modified based on the questionnaire from Carreira’s study (2016) for the evaluation of language learning motivation and attitudes. The questionnaire was designed to investigate the students’ perceptions from three perspectives, including their perception toward their attitudes toward grammar videos and Zuvio IRS (39 items), interaction, and learning materials. Each item was measured on the 5-point Likert scale, ranging from 5 (Strongly Agree) to 1 (Strongly Disagree). Moreover, the researcher designed several open-ended questions for participants to understand their more in-depth reflection of using Zuvio IRS and learning grammar by watching videos.

Procedure
This experiment was conducted in 2018 and lasted for 18 weeks. One video was demonstrated per week, and each video lasted for only several minutes and took 30 minutes to complete follow-up exercises. The researcher designed at least ten questions for each grammar point based on the content of the British Council Grammar Snacks videos before the class. During the class, the instructor first taught grammar points, asked students to do exercises, and played the specific grammar video to the students. When the instructor considered that the students watched the video that students might not understand well, the instructor would then pause the video and make students answer the questions via Zuvio IRS. Since each video just played several minutes, most students watched the whole video once and answered all the questions simultaneously. At the end of the questions, the instructor would check the students' answers and discuss with them. In the last week of grammar class, students were asked to complete the questionnaire and open-ended questions. Those procedures were in a sociocultural context (see Figure. 3).
Figure 3 Task model for IRS learners in Sociocultural Context

Data Analysis
The data from the questionnaire and open-ended answers were analyzed according to the research questions. SPSS 18 for Windows was used as the leading software for statistical analysis. Descriptive statistics were calculated to describe the means, and standard deviations were adopted to analyze the questionnaire results of perceptions toward English grammar learning in a Zuvio IRS classroom. For the open-ended questions from the questionnaire, each participant was given a code; for example, AE-0001 represents learner 0001 in AE. The researcher firstly translated the responses to the open-ended questions into raw data for each participant and then re-coded the raw data to different themes to understand the learners’ perceptions of grammar learning via Zuvio IRS. The themes were designed according to the research questions and their feedback in open-ended questions.

Results
Results of Students’ three closed-ended questions
1. How does the use of the IRS influence students' perceptions of their learning attitudes?
   The data from the questionnaire regarding learners' perceptions of their attitudes were analyzed to answer the first question. Table 1 shows the descriptive results of the students’ response to their learning attitudes. Among the 56 returned questionnaires, five were incomplete and invalid. Thus, the researcher only computed the results for 49 questionnaires. The mean scores of 18 questions ranged from 2.98 to 3.71 with acceptable standard deviations; thus, all students displayed moderate levels of agreement regarding the statements in the questionnaire. Items 1 to 9 are related to the students' perceptions toward learning attitudes of using Zuvio IRS. As shown in Table 1, the students agreed that they enjoy using Zuvio IRS to help their learning grammar (M=3.67) and are willing to learn more in this way (M=3.55).

   Item 10 to 18 investigated students’ perception of learning attitudes by watching grammar videos. Students agreed that watching English videos could improve their listening skills (M=3.69)
and increase their learning motivation ($M=3.71$). On the other hand, students reported that they are less willing to watch grammar videos after class ($M=2.65$). Results of these questions indicated that the students feel positive and joyful with the use of Zuvio IRS; also, they believed in improving their listening proficiency by watching British Council Grammar videos and could continue to practice it for improving my grammar.

Table 1. *Descriptive results for participants’ perceptions toward the learning attitudes*

<table>
<thead>
<tr>
<th>RQ</th>
<th>No</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning Attitudes</td>
<td>It is a pleasure to learn in this way.</td>
<td>3.67</td>
<td>.774</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>I want to learn in this way in more subjects (classes).</td>
<td>3.55</td>
<td>.914</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>I am satisfied with my performance in learning activities.</td>
<td>3.31</td>
<td>.742</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Using Zuvio is very rewarding when I learn.</td>
<td>3.27</td>
<td>.953</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Using Zuvio is very helpful to my learning.</td>
<td>3.27</td>
<td>.972</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Using Zuvio is very helpful in making my positive learning attitude toward this subject.</td>
<td>3.06</td>
<td>1.008</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Using Zuvio helps me to increase my learning interests toward this subject.</td>
<td>3.04</td>
<td>.999</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Using Zuvio allows me to concentrate on my studies.</td>
<td>3.08</td>
<td>1.017</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Using Zuvio lets me learn the course content faster.</td>
<td>3.20</td>
<td>1.020</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Using Zuvio to learn is easy for me, no pressure at all.</td>
<td>3.71</td>
<td>.898</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Using British Council Grammar videos increases my learning motivation.</td>
<td>3.45</td>
<td>.937</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Using British Council Grammar videos to learn English is less stressful.</td>
<td>3.51</td>
<td>.845</td>
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<tr>
<td></td>
<td>12</td>
<td>I use British Council Grammar videos, both in-class and after-class.</td>
<td>2.65</td>
<td>1.032</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Because of this method of English training, I begin to listen to British Council Grammar videos.</td>
<td>2.98</td>
<td>.924</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>I like to use British Council Grammar videos after-class because I can repeat learning the content that I am not familiar with.</td>
<td>3.35</td>
<td>.948</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>After listening to British Council Grammar videos, I learn more methods of self-learning English at home.</td>
<td>3.59</td>
<td>.888</td>
</tr>
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<td></td>
<td>16</td>
<td>After listening to British Council Grammar videos, I would like to continue using it for improving grammar.</td>
<td>3.65</td>
<td>.879</td>
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<td></td>
<td>17</td>
<td>I believe that practicing more with British Council Grammar videos can improve my English listening proficiency.</td>
<td>3.69</td>
<td>.796</td>
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1. How does the use of the IRS influence students' perceptions toward learning contents?

The data from the questionnaire regarding learners' perceptions toward their learning contents were analyzed to answer the second question. Table 2 shows the descriptive results of the students’ response to their learning contents. In this domain, “Learning contents about British Council Grammar videos,” obtained mean scores ranging from 3.20 to 3.90, which indicates that students experienced a moderate level of an agreement the questions. Question 4, 6, 9, and 10 obtained the higher mean scores of 3.67, 3.67, 3.73, and 3.90, respectively, indicating that students thought that...
the contents of grammar videos indeed facilitate their English learning in terms of the practical English usage, general knowledge, and spoken language.

Table 2. Descriptive results for participants’ perceptions toward the learning contents

<table>
<thead>
<tr>
<th>RQ</th>
<th>No Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Content</td>
<td>Using British Council Grammar videos helps learn new English vocabularies.</td>
<td>3.60</td>
<td>.818</td>
</tr>
<tr>
<td>2</td>
<td>Using British Council Grammar videos makes English grammar learning fun.</td>
<td>3.59</td>
<td>.788</td>
</tr>
<tr>
<td>3</td>
<td>I will continue to use British Council Grammar videos to improve English grammar.</td>
<td>3.20</td>
<td>.935</td>
</tr>
<tr>
<td>4</td>
<td>Practicing with British Council Grammar videos is helpful in my English grammar learning.</td>
<td>3.67</td>
<td>.826</td>
</tr>
<tr>
<td>5</td>
<td>Using British Council Grammar videos enriches my English grammar learning and life.</td>
<td>3.53</td>
<td>.868</td>
</tr>
<tr>
<td>6</td>
<td>British Council Grammar videos provide much information on English grammar learning.</td>
<td>3.67</td>
<td>.851</td>
</tr>
<tr>
<td>7</td>
<td>I like to use British Council Grammar videos to learn with varieties of video contents.</td>
<td>3.51</td>
<td>.916</td>
</tr>
<tr>
<td>8</td>
<td>I like to use British Council Grammar videos to enhance the training of my English listening.</td>
<td>3.43</td>
<td>.957</td>
</tr>
<tr>
<td>9</td>
<td>I like to learn general knowledge through British Council Grammar videos in the English grammar class.</td>
<td>3.73</td>
<td>.811</td>
</tr>
<tr>
<td>10</td>
<td>I like to learn the usage of spoken language through British Council Grammar videos in an English listening and speaking class.</td>
<td>3.90</td>
<td>.714</td>
</tr>
<tr>
<td>11</td>
<td>After listening to British Council Grammar videos, I found more vocabularies and usages from the video than the textbook.</td>
<td>3.63</td>
<td>.883</td>
</tr>
</tbody>
</table>

2. How does the use of the IRS influence students' perceptions toward classroom interaction?

The data from the questionnaire regarding learners’ perceptions toward classroom interaction was analyzed to answer the third question. As illustrated in Table 3, descriptive statistics for each questionnaire mean, ranging from 3.16 to 4.04, which indicated that students possessed moderately high levels of agreement and positive feedback on classroom interaction. Question 5, 10, and 6 obtained the high mean scores of 4.04, 3.63, and 3.41, respectively, indicating that students addressed that Zuvio IRS was easy to use and interacted with the teacher via Zuvio IRS after watching grammar videos. The mean score of Question 3 and 4 is 3.16, which reveals that a few of the students did not consider using Zuvio IRS help their interaction with classmates and answer questions in class. In particular, question 3, “I think using Zuvio can increase opportunities for me to discuss with other classmates,” obtained the lowest score of 3.16, indicating that students did not have enough practices to interact with classmates.
To conclude, the moderate average mean scores on 39 statements in the learning attitudes, contents, and classroom interaction survey completed by the 49 students indicate that students possessed positive attitudes toward British Council grammar videos learning and IRS Zuvio platform.

Table 3. Descriptive results for participants’ perceptions toward classroom interaction

<table>
<thead>
<tr>
<th>RQ</th>
<th>No</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction</td>
<td>1</td>
<td>Using Zuvio can let me realize if my classmates and I understand the course content or not.</td>
<td>3.35</td>
<td>1.091</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Using Zuvio can let me know if I am following the progress of the course.</td>
<td>3.41</td>
<td>.998</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>I think using Zuvio can increase opportunities for me to discuss with other classmates.</td>
<td>3.16</td>
<td>1.067</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>I think Zuvio can help me to answer questions in class.</td>
<td>3.16</td>
<td>1.067</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Using Zuvio is simple for me to operate.</td>
<td>4.04</td>
<td>.789</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>I think the interaction with teachers is better with using Zuvio than the traditional instruction.</td>
<td>3.41</td>
<td>1.135</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>I think the discussion in a class by using Zuvio is better than traditional instruction.</td>
<td>3.27</td>
<td>1.095</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>I think I like to interact with teachers by using Zuvio in classes overall.</td>
<td>3.29</td>
<td>1.080</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>I like to discuss the content of videos with classmates in English grammar class.</td>
<td>3.18</td>
<td>.811</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>I like the way that the teacher guides us learning by using British Council Grammar videos.</td>
<td>3.63</td>
<td>.668</td>
</tr>
</tbody>
</table>

Analysis of Students’ three open-ended questions

Question 1: Do you think that you have more fun and achievement in English grammar learning by using British Council Grammar videos? Why?

The qualitative data from students’ feedback of question 1 were organized and presented in Table 4. The feedback for the first question open-ended question was further categorized into three categories: Interesting videos, Learning daily conversation, and Different learning materials. The data show that the students affirmed that watching British Council Grammar videos was more, and they were willing to continue learning grammar. The second category was learning daily conversation. The data show that students agreed that the content in British Council grammar videos would help them to learn new words and more daily English conversation. Moreover, students reported that they felt a sense of achievement after they learned new vocabulary or knew something new about western culture. The third category was different learning material. Some students thought that it was boring when they listened to lectures for grammar points. With British Council grammar videos, they enjoyed watching some interactive English episodes.
Table 4. The organized qualitative feedback from the questionnaire question 1

<table>
<thead>
<tr>
<th>Theme</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Interesting videos</td>
<td>• Increase interest in learning. There are videos and cartoons, not merely teachers' lectures. AE-002</td>
</tr>
<tr>
<td></td>
<td>• It is fun to learn grammar with videos. If I can understand the English content by listening, I have a sense of accomplishment. AE-0003</td>
</tr>
<tr>
<td></td>
<td>• It is more interesting and fun to learning with videos. AE-0033</td>
</tr>
<tr>
<td></td>
<td>• It attracts people because it is interesting comparing with traditional learning methods. AE-0042</td>
</tr>
<tr>
<td>b. Learning daily</td>
<td>• I can learn dialogs from daily lives, it is helpful to my English listening and speaking. AE-0012</td>
</tr>
<tr>
<td>Learning daily conversation</td>
<td>• The language used in the videos is colloquial and not too formal. It is more fun. AE-0033</td>
</tr>
<tr>
<td></td>
<td>• I can learn more new cultures, vocabularies that makes me feel accomplished. AE-0025</td>
</tr>
<tr>
<td></td>
<td>• I can learn more phrases and vocabularies AE-0038</td>
</tr>
<tr>
<td>c. Different learning</td>
<td>• Using video with short stories can make learning closer to your daily lives. Video can present the learning content lively.</td>
</tr>
<tr>
<td>material</td>
<td>• AE-0029</td>
</tr>
<tr>
<td></td>
<td>• Because it is boring to listen to teachers always in a class, it is better to have us watch. AE-0048</td>
</tr>
</tbody>
</table>

Question 2: What are the effects of using British Council Grammar videos in learning English?

The qualitative data from students’ feedback of question two were organized and displayed in Table 5. The feedback for the second question open-ended question was further categorized into two categories: Learn the British accent and Increase learning motivation. The data show that the students agreed that watching British Council Grammar videos could help them to practice the British English accent and they would have more opportunities to learn different accent from videos by improving their listening comprehension. The second category was to Increase learning motivation. The data show that students asserted that grammar videos broaden their horizons because of the different themes in the episodes. After watching grammar videos, they would increase motivation to learn more about different grammar points.

Table 5. The organized qualitative feedback from the questionnaire question 2

<table>
<thead>
<tr>
<th>Theme</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Learn the British</td>
<td>• Practice British pronunciation and improve my listening skills. AE-002</td>
</tr>
<tr>
<td>English accent</td>
<td>• I get used to British English accent. AE-0009</td>
</tr>
<tr>
<td></td>
<td>• It is an additional opportunity to practice listening while studying grammar. AE-0012</td>
</tr>
<tr>
<td></td>
<td>• It let me have some improvements and learn foreign accents. AE-0012</td>
</tr>
<tr>
<td>b. Increase learning</td>
<td>• I have interests in learning English, and I have the motivation to learn more. AE-0011</td>
</tr>
<tr>
<td>motivation</td>
<td>• Can train my English listening and understand directly how to use grammar correctly. AE-0051</td>
</tr>
</tbody>
</table>
I understand grammar in a different way. AE-0002
I can enrich and widen my knowledge and understand the world more. AE-0042

Question 3: What are your suggestions on Zuvio IRS?

The qualitative data from students’ feedback of question three were organized and demonstrated in Table 6. The feedback for the third question was further categorized into three categories: More various question designs, Instant and interactive response, and distraction in the classroom. Students suggested that teachers should give more diverse exercises, not only multiple-choice. Other students stated that they could check whether their understanding of the content was correct via Zuvio IRS instantly; however, a few students suggested that it would be better if they could see an explanation to each answer via the interface of Zuvio IRS. Another student mentioned that students could answer questions anonymously, so it would be less stressful to answer questions. As for the second category, students agreed that the feature could instantly help the teacher check their answers and also allow both the teacher and students observe all of the students’ answers. On the other hand, several students mentioned that it would distract their learning when using Zuvio IRS to answer questions. They would prefer traditional lectures because they would tend to over-rely on smartphones.

Table 6. The organized qualitative feedback from the questionnaire question 3

<table>
<thead>
<tr>
<th>Theme</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. More various question</td>
<td>• The teacher can have a variety of types of questions. AE-0003</td>
</tr>
<tr>
<td>designs</td>
<td>• The teacher can assign more types of homework. AE-0021</td>
</tr>
<tr>
<td></td>
<td>• The teacher can provide more extracurricular grammar questions for</td>
</tr>
<tr>
<td></td>
<td>students to practice. AE-0036</td>
</tr>
<tr>
<td>b. Instant response</td>
<td>• Review the answers immediately. AE-0009</td>
</tr>
<tr>
<td></td>
<td>• It is easier to know if I understand clearly by reviewing with the</td>
</tr>
<tr>
<td></td>
<td>teacher and classmates. AE-0016</td>
</tr>
<tr>
<td></td>
<td>• I can get answers immediately and study the lesson that I get wrong.</td>
</tr>
<tr>
<td></td>
<td>AE-0041</td>
</tr>
<tr>
<td>c. Distraction in the</td>
<td>• My spelling skill gets weaker because of relying on a cellphone too</td>
</tr>
<tr>
<td>classroom</td>
<td>much. I prefer learning in a traditional way when it is related to a</td>
</tr>
<tr>
<td></td>
<td>course. AE-0023</td>
</tr>
<tr>
<td></td>
<td>• It is quite inconvenient if the cellphone is out of battery or cannot</td>
</tr>
<tr>
<td></td>
<td>be connected to the Internet. AE-0019</td>
</tr>
</tbody>
</table>

Discussion

The purpose of this study was to integrate an interactive response system into an English grammar course and to explore whether the assistance of this digital tool could promote students' learning motivation and whether it could facilitate a student learning environment. The results of this experimental study indicate that students need more learning contents to practice both for grammar materials and online materials. Also, the use of Zuvio IRS in a language classroom indeed facilitates students’ learning. In answer to the first question (How does the use of the IRS influence students' perceptions toward their learning attitudes?) the current research results reveal that the
students felt positive and joyful with the use of Zuvio IRS in class, but it was noticed that the students reported that they are less willing to watch grammar videos after class. This result is consistent with other IRS research findings (Chen, 2014; Khalil & Fahim, 2016; Wang, 2016) which reported the IRS’ positive effects of formative assessment. The IRS made it possible to assess the degree of students’ understanding instantly and assist the teacher to decide how much to explain in detail or proceed to the next part of the lesson. Thus, in answer to the second question (How does the use of the IRS influence students' perceptions toward learning contents?), the finding showed that the contents of grammar videos indeed improve their English learning in terms of the practical English usage, general knowledge, and spoken language. This could be explained by the findings of the qualitative data which addressed that teachers should always leave room for leaner agency and design meaningful in-class and follow-up activities (Liu & Chao, 2017).

The results of the open-ended question also revealed that students enjoyed watching grammar videos to broaden their horizons because they liked different themes in the episodes. To answer the last research question (How does the use of the IRS influence students' perceptions toward classroom interaction?), the study presented that, according to the questionnaire and open-ended question results, students reported that Zuvio IRS was easy to employ and it was a tool to interact with the teacher after watching grammar videos. The current findings were in accordance with Lee and Oh’s (2014) study which suggested that students had positive feedback on IRS in an EFL reading class, and the current finding supported the fact that college learners would like to participate in the IRS activities in class. Besides, according to the students’ qualitative feedback, it was also found that some students were aware of some drawbacks of Zuvio IRS such as the failure of Internet connection and distraction in the classroom. This observation was in line with Chen's (2019) findings on the effects of web-based IRS research.

Conclusion
Over the past years, different mobile technologies have been integrated into classroom settings. Among those technologies, the IRS can be used for increasing classroom interaction and students’ learning motivation. The purpose of this study was to integrate an interactive response system into an English grammar course and to explore if this digital tool promoted students' learning motivation and facilitated students’ learning. After 18 weeks of English grammar class instruction with Zuvio IRS and the British Council Grammar Snacks videos, data was collected through questionnaires consisted with demographic information, close-ended Likert scale items, and open-ended short answer items. The results showed a positive attitude from students when learning with Zuvio IRS with video. Students also enjoyed learning with the content video via Zuvio IRS but only in the class time, not after class. Zuvio mediates the interactions between students and the teacher and other classmates. Students liked to interact with the teacher directly, but unaware of the interaction mediated by Zuvio IRS with the teacher, and other classmates were incorporated with the direct interaction with the teacher.

Future studies might explore whether students from different majors will have different learning outcomes. Besides, learners’ detailed demographic data could be collected for further cross-data analysis. Further IRS research topics could focus on how the results of IRS studies could be implemented into curriculum and instruction. More importantly, it is crucial for teachers to
design appropriate questions of the IRS platform to have better interaction and more effective learning in large language classes.

**About the author**

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Abstract
Computer-Assisted Language Learning (CALL) is playing a vital role in teaching English language to English as a Foreign Language (EFL) students. However, to best of my knowledge a little has been done in this regard to keep the students in line with the most recent advancements in this paradigm in Saudi Arabia. This paper evaluates the efficacy of CALL in improving students’ writing skills and provides innovative techniques and robust strategies for long-lasting learning. The research seeks to fill in the knowledge gap regarding prospects of using CALL in the Kingdom with these main research questions; 1) how is the technology presently used for teaching the writing skills?; 2) what is the true impact of using CALL on students’ writing skills?; 3) which area of the language (organization, structure, content, grammar) sees the most improvements by CALL to make them better writers? A quantitative research design was used for this study. The sample was sixty female students of a Saudi University divided equally into control and experimental groups. The elicited data analysis indicates that the performance scores of two groups differ significantly when taught through CALL. The research contends that using CALL can enhance students’ writing skills over a short period of time when compared to the traditional ways of improving the writing skills. The current study also recommends that language classrooms should be equipped with all the latest technological facilities to encourage the use of CALL.

Keywords: Computer-Assisted Language Learning (CALL), technology, writing skills, efficacy, EFL in Saudi Arabia

Introduction

Use of computer technology has significantly influenced the learning process of students in all disciplines across the globe. Technological advancements have imparted fundamental changes to the field of linguistic education, especially in English Language teaching. Computer technology has opened seemingly unconstrained boundaries of knowledge that for most part have remained unexplored before. The use of suitable technological materials can be highly useful for learners (Clements & Sarama, 2003 as cited in Ahmadi, 2018). Basically, the technology facilitates language leaning processes by providing teachers and students digital spaces and locales in an adaptable environment. In another study, Pinner (2012) found that because of intrinsic motivation or pedagogic value most teachers use CALL. “Another source of teachers’ intrinsic motivation to use CALL could be the relevance they ascribe it to their students and the modern world” (p. 190), Pinner (2012) further concluded. However, as with any technology that has human interaction, learning capacity and preference and as well as demographic characteristics of students are likely to influence the efficacy of the technology towards a desired objective.

Reliance on conventional teaching approaches in teaching the writing skills that make use of the outdated methods involving textbooks style teaching has a limiting effect of the learning gradient of students. Javid, Farooq, & Umer (2013) state: The difficulty of teaching/learning of this skill is due to the fact that it involves a comprehensive knowledge of grammar, suitable vocabulary, writing mechanics (e.g., punctuation & capitalization), organizational skills, style, imagination etc. (p. 163)

Subjecting students to a few prescribed textbooks over the length of the course is prone to making the learning experience burdensome and troublesome for students and void of any meaningful interaction with their teachers. Moreover, students are usually offered limited practice on a few specific exercises that is typically restricted to academic essay writing only. This in turn makes the writing task a strenuous and monotonous experience for the students. Resultantly, students may able to tentatively set down a descriptive paragraph, a short or a lengthy essay on the given topic by utilizing the techniques their teacher taught them through textbooks; however, they are barely able to articulate creativity in their ideas beyond a certain point.

The unexplored world of CALL offers tremendous learning opportunities to EFL students in ways that are informal but yet very effective. Academic researchers and teachers alike agree that effective use of CALL can transform a traditional classroom into a simulating environment that engages students’ interest in learning and make them feel sufficiently motivated to express themselves (Stockwell, 2018; Beatty, 2010; Levy, 1997). In that regard, various CALL devices such as interactive smartboards, digital projectors, tablets, and other hand-held electronic media can be used to accelerate learning process and make students confident about their learning potential. Well-designed graphics and visual images with sound impact offer students a chance to be more imaginative about writing their ideas. CALL creates a meaningful context to the environment they can learn in. When information is presented through multimedia, students can better understand the objects and events that are being described to them by the instructor.

To this end, teachers can design a variety of writing activities thereby transforming the learning environment into one that would motivate students to develop a more rigorous interest in
composing their drafts. Pinner (2012) declares, "a CALL classroom" to be "more motivating for students than a traditional classroom." (p. 191) In a way, CALL acts as a portal between the instructor and the students by establishing a clear picture of the said words. Further, it allows students to better comprehend the interaction of various aspects of the learning processes. Using grammar and spelling checkers applications puts them on an ease to compose error free drafts because these are standardized tools of word processor (Beatty, 2010). CALL can also minimize the burden and fatigue of extended teacher-talk giving a way to non-verbal presentation. In terms of performance evaluation, CALL provides a quick correction feedback loop between teachers and students. Al-Mansour and Al-Shorman (2012) have also noted this interesting feature of CALL that computer ‘provides immediate feedback’. Teachers can perform error analysis in classroom for the commonly made mistakes and show the corrections to students in real-time on the interactive board. This saves a significant amount of time that would be wasted otherwise in a conventional style teaching where teacher’s feedback is lagged by a day, at least.

A wide range of computer technology devices with distinctive features are available these days. The appropriation of these devices in teaching and learning language has been a focus of interest for researchers and teachers. CALL can help researchers understand complexity of the English language learning processes, though the diversity and variety in CALL methods could be over whelming and confusing at times. Also, as with any technology that has a human interaction component, learning capacity, prior exposure to the technology and demographic characteristics of subjects are likely to influence the desired outcomes. In that regard, this research is aimed at investigating the promise of CALL in teaching the English language writing skill to undergraduate students at a university in Saudi Arabia. The remainder of this paper is organized as follows. The next section provides a synthesis of the relevant literature on the subject matter. Following that, data collection and research methods are discussed. Results section summarize the key findings of the research, and the last section covers the research conclusion and recommendations for future research.

**Literature Review**

*What is Computer-Assisted Language Learning (CALL)?*

A review of the relevant literature on the subject matters entail various definitions of CALL. For instance, Beatty (2010) defines CALL as "any process in which a learner uses a computer and, as a result, improves his or her language". (p. 7) On another instance, Beatty(2010) defines CALL as "an amorphous or unstructured discipline, constantly evolving in terms of pedagogy and technological advances in computer literacy and related literacies among both teachers and learners."(p. 9) CALL is considered as an effective tool in facilitating teaching and learning of English language as a second (ESL) or foreign language (EFL). The inherent functionality of CALL has motivated teachers to discover innovative techniques in teaching general language skills such as reading, writing, speaking and listening, as well as challenging concepts in shorter duration with better outcomes.

Using CALL in a language classroom is useful for both teachers and students. Pinner (2012) observes, "Using CALL is more motivating for students than simply employing books and whiteboards."(p. 191) He gives three main benefits of using CALL that are relevancy, authenticity and engagement, also mentioned by Al-Mansour and Al-Shorman (2012, p. 52).
In today’s digital age, it is rare to find any linguistic program, especially a foreign or a second language (L2) program, that does not employ CALL in some form or not (Stockwell, 2012). However, as stated in the earlier, the use of CALL may differ from learner to learner, teacher to teacher and even more so, from community to community. Within this realm, CALL fosters autonomy in learners in many ways including independent learning (Beatty, 2010). More specifically, self-directed learning procedures such as ‘review and revisit’ can guide learners to set their dimensions in learning a specific language skill outside the classroom. This unique feature is observed by Li and Cumming (2001) in a case study in investigating the effect of word processing on ESL students' writing and evaluation of their writing. The learners may need to master some parts of the skill taught in class once, repeated twice and reviewed thrice. Specifically, in writing skills, self-directed procedures create awareness in learners and help them focus on their strengths. “Writing is learned, not taught, so writing instruction is nondirective and personal” (Hyland, 2003, p. 9).

The Writing Skills: Importance and Learning with CALL

Writing is precisely defined as a thinking process that involves cognitive skills and requires ample training and exposure to the materials as stated by Fadda (2012), "Academic writing is a mental and cognitive activity, since it is a product of the mind." (p. 124) Compared to all other forms of language skills, it requires more elevated level of intellectual sophistication. Being invariably the most refined skill of language, writing demands perfect exquisiteness of literal and metaphorical expression. EFL students struggle hard to achieve this level of perfection.

Writing has often been described as a demanding and sometimes troublesome dimension of academic life (Murray & Moore, 2006). However, one should take writing as a rudimentary adult pursuit that is linked to particular activities that a person performs in a society, as mentioned by Tribble, Candlin, & Widdowson (2009). They further list a variety of social activities which stretch from inviting people to a formal dinner to making a law. Tribble et al., (2009) is of the view that if a person is deprived from learning how to write then, resultantly, s/he could be excluded from a wide range of social roles. This view is also supported by Harmer (1998) that writing is a basic language skill. Harmer (1998) also points out four main reasons of teaching writing to EFL students, “reinforcement, language development, earning style and more importantly, writing as a skill in its own." (p. 79) According to Harmer (1998), “Students need to know how to write letters, how to put written reports together, how to reply to advertisements – and increasingly, how to write using electronic media." (p. 79-80), and all the basic functions mentioned by other writers. An element of these social roles is also reflected in the work of McWhortor (2010). McWhortor (2010) discusses her unique, highly visual, student-centered approach where she focuses on not only the purpose of writing but also responding to the needs of different audience and responding appropriately to different kinds of rhetorical situations.

For the EFL students, learning writing skills can be exciting and frustrating at times. Writing tends to be more specific and uses special devices to keep it going (Harmer, 1998) EFL Students typically face problems in being more precise and dealing with different text functions. As a writer, they need to think hard to create cohesion and unity in the text they compose. A common hurdle is to present imaginative ideas in the form of words. In other words, they lack practice in mind mapping that is sometimes given secondary importance in traditional teaching
style, whereas mind-mapping software in a CALL classroom benefits the students to export and save their ideas in final mode (Walker & White, 2013). Development of a good combination of sentences forming paragraphs is required to create a complete piece of writing. Students need a lot of practice to organize their thoughts. If key concepts are uninterpreted and indeterminate, the students will be unable to produce the desired results. Their performance is reported to below due to weak command over content, text organization, grammar, vocabulary, punctuation, and mechanics. This problem is also pointed out by Khan (2011), Javid et al., (2013) and Mudawy (2019). Therefore, the productivity of the writing skill depends on priming the consciousness of the novice writers in and outside the class. This outcome can be masterfully achieved by using CALL software programs in teaching the writing skills.

Evolution of technology over time played a key role in the development of CALL as a concept and a tool for linguistics. A variety of programs developed in early 80’s and 90’s provided innovative and creative ways to the novice writers to polish their writing skills such as Storyboard, developed in 1980, which pioneered text reconstruction program for small computers. The purpose of this program was rewriting the text using contextual clues in the preliminary material (Levy, 1997). The availability of mainstream personal computers also paved the way for a stream of language learning software programs. These include but not limited to WIDA, Advanced Learner’s Dictionary on CD-ROM, English Grammar Guide, Learn to Speak English, Encyclopedia etc. These programs became popular very quickly as unlike traditional teaching and learning resources, the learners could learn on their own pace.

With the dawn of high-speed internet in early 2000’s, many online CALL programs with instant feedback feature became available to the learners. These programs, to date, offer language practice and encourage and motivate learners to remain actively engaged in the learning process.

Also, OWLs (Online Writing Labs), a key functionality of CALL, in that regard provide useful resources for learners to improve their writing skills. This include vocabulary and grammar advice, text structure guide, reference styling, avoiding writer’s paralysis, to name a few. In teaching the writing skills while discussing the current approaches, Walker and White (2013) mention the "product approach". For applying this approach, they suggest OWLs because these are popular among computer users and ‘Prude University Owl’, founded in 1995, is a fine example. They further suggest, "OWLs provide a wide range of resources for writers including grammar advice, guidance on referencing, tips on getting started, avoiding writer’s block and so on." (p.63) As discussed earlier, students face problems in generating the ideas on a specific genre. Teachers can help to sort out these problems by using different online resources and applications, as suggested by Walker and White (2013) talking about processes approaches:

If we think of writing as involving cyclical processes of idea generation, planning, drafting, composing editing (White & Arndt 1991), there are many technological tools which are currently available for second language (L2) to do these things, and there are likely to be more in the future. (p.64)

The availability of word-processing packages and various CALL features such as hypertext, hypermedia and multimedia (Beatty, 2010) has changed the way students communicate their ideas
in writing. Nonetheless, the use of CALL technology in learning writing skills motivates the students, encourages them to write more and enhance their critical thinking abilities Al-Mansour and Al-Shorman (2012).

Data Collection and Research Methodology

The following hypotheses were developed to find the answers to the research questions mentioned in abstract of the paper:

i. The present use of technology for teaching and learning the English language is limited and inadequate.

ii. CALL will produce improved content, structure and grammar dimensions of the English language.

iii. CALL will have strong positive effect on students’ writing skill and they will be able to write better.

By validating the above hypotheses, the research was able to evaluate the efficacy of using CALL in teaching English language writing skills to the undergraduate female students at a Saudi University. A random sample of 60 Saudi female undergraduate students was selected to participate in this research. The sample ages varied from 18 to 23 years, and average age was about 19 years. By the time of selection, the students had already been studying English as their ‘major’ for almost two and half years and had gained sufficient knowledge to write short or long essays with reasonable command and clarity.

The sample was randomly split into Experimental Group and Control Group as sub-groups, with thirty students in each group. A series of multimedia lectures were delivered to the Experimental Group while conventional teaching methodology was adopted for Control Group. Any kind of CALL practice, activity or exercise was not undertaken by the students in the Control Group. Rather, they were instructed to do all the assigned written work manually. Both groups learnt the basic concepts of writing skills during the six weeks of the research. The timeline of the different research activities is presented in Table 1.

Table 1. Research plan

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Lecture - basic writing concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 2</td>
<td>Writing task 1 (organization and content of the text)</td>
</tr>
<tr>
<td>Week 3</td>
<td>Lecture - coherence and unity in essay writing</td>
</tr>
<tr>
<td>Week 4</td>
<td>Writing task 2 (unity and coherence in the text)</td>
</tr>
<tr>
<td>Week 5</td>
<td>Lecture - grammatical aspects in essay writing</td>
</tr>
<tr>
<td>Week 6</td>
<td>Writing task 3 (grammar: tenses, active and passive sentences)</td>
</tr>
</tbody>
</table>

Results

Table 2 shows the results of the three tasks undertaken by each of the Experimental and Control Groups. For consistency, student’s attendance was ensured such that equal number of students wrote the three tasks in both groups. The Experimental Group performed better with an overall average of 74.47% for the three tasks compared to 70.82% for the Control Group. In contrast, the
overall standard deviation of scores for the three tasks undertaken by the two groups was not very different, 17.53% and 17.12%, for the Experimental and Control Groups, receptively. Almost identical values of standard deviation for the two groups points to the non-existence of outliers and a uniform response to the methods of teaching (i.e. CALL vs traditional method), the two groups of students were subjected to in this research.

<table>
<thead>
<tr>
<th>Table 2. Results of the writing tasks by the two research groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Experimental group</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Control group</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Sample Calculations**

Sum of Percentage Marks of Task 1 (Control Group) = \( x \)

Total No. of Students in Control Group = \( n \)

Mean Percentage Marks of Task 1 (Control Group) = \( \overline{x} \)

\[
\overline{x} = \frac{\sum x}{n} = \frac{20.04}{30} = 66.8\%
\]

Standard Deviation of Task 1 (Control Group) = \( s \)

\[
s = \sqrt{\frac{\sum x^2 - (\sum x)^2}{n-1}} = \sqrt{\frac{14.4302 - (20.04)^2}{30-1}} = 18.97\%
\]

<table>
<thead>
<tr>
<th>Figure 1. A comparison chart of the two groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Percentage Marks</strong></td>
</tr>
<tr>
<td>Task 1</td>
</tr>
<tr>
<td>Task 2</td>
</tr>
<tr>
<td>Task 3</td>
</tr>
</tbody>
</table>
Figure 1 represents the graphic comparison of the results of the Control group and the Experimental group.

![Figure 1](image1.png)

**Figure 2. A task-wise performance of the two groups**

Figure 2 shows the task-wise comparison of the performance of the two groups. For Task# 1, both groups nearly perform equally well. This could be attributed to the Experimental Group’s warming-up to the CALL technology. However, results pertaining to Task# 2, the show that the students in the Experimental Group, performed well when compared to the students in the Control group who were not exposed to any kind of computer-assisted CALL activities. The result of task 2 differentiated both groups by 4.83% with a higher mean percentage marks for experimental group of 76.80%, compared to 71.97% of control group. This result proves that the experimental group had started to show an increase in their performance due to computer-assisted activities.

Likewise, Experimental Group did well in Task# 3 compared to the Control group. Here, the largest difference of 6.07% between the two groups was observed. The Experimental group scored much higher (78.20%) than the control group (72.13%) which provides further evidence that the computer-assisted program helped students improve their writing skills.

To conclude, the Experimental group’s performance in the three tasks improved by 9.80 percentage points. This is more than 2.5 times that of the Control group which improved by only 3.76% over the course of the three tasks. These results suggest that the students in Experimental group not only performed better, but they could have continued to stay way ahead of their counterparts if additional tasks had been conducted.

However, three independent-samples t-tests were conducted to compare students’ performance in the Experimental and the Control conditions for all the three writing tasks, and the differences were not significant. There was not a significant
difference in the scores of the first task for the Experimental ($M=68.40$, $SD=18.44$) and the Control conditions ($M=66.80$, $SD=18.97$); $t(58)=0.33$, $p = 0.741$. Similarly, there was no significant difference in the scores of the second task for the Experimental ($M=76.80$, $SD=16.40$) and the Control conditions ($M=71.97$, $SD=15.60$); $t(58)=1.1688$, $p = 0.247$. Finally, there was not a significant difference in the scores of the third task for the Experimental ($M=78.20$, $SD=17.76$) and the Control conditions ($M=72.13$, $SD=16.27$); $t(58)=1.3803$, $p = 0.172$.

**Conclusion**

This research evaluated the efficacy of using CALL in teaching the writing skills. The sample consisted of 60 Saudi female undergraduate students randomly divided into two sub-groups. Participants were given lectures on the basic concepts of writing. The Experimental group was taught using CALL whereas the Controlled group was subjected to traditional ways of teaching. Both groups received three tests: 1)- Organization and content of the text, 2)- unity and coherence in the text, and 3)- grammar: tenses, active and passive sentences.

The first research hypothesis was about the limited use of technology in the English language teaching. The introductory lectures, difficulties in the arrangement of CALL material by the researchers and the results of the first test for both groups verified that this hypothesis was true. The results for the remaining two tests conclusively prove that students’ writing skills can be enhanced and improved through CALL thereby validating the second and third hypothesis of this research. Moreover, the results indicate that if students are provided with the opportunity to go beyond the prescribed syllabi, their writing power can improve significantly compared to when they are taught using traditional text book methods. Finally, fostering CALL in teaching English language writing skill can improve students’ rate of learning the complex art of writing.

For future research, more rigorous test regimes and experimental tools could be developed to extend the research frame work to additional English language learning skills, and to evaluate the efficiency of CALL tools over an extended time period.

**About the author:**

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**References**


Can Home Use of Speech-Enabled Artificial Intelligence Mitigate Foreign Language Anxiety – Investigation of a Concept

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Abstract
The harmful effects of speech-related anxiety among learners and users of foreign language is well documented. Aiming to investigate the potential of reducing anxiety through ad libitum interaction with Artificial Intelligence chatbots, a controlled pilot study was conducted on East Asian staff of a large financial institution over a 4-week period, the sample of 40 divided between a test group using AI and the non-exposed subjects. Variety of measures were employed to gain as comprehensive an insight as warranted given the study limitations of a small sample, brief study period and relatively unsophisticated but freely available AI chatbot. The measures ranged from surveys of anxiety, attitudes toward daily chatbot usage, oral interviews and IELTS testing of English speaking ability. The results were cautiously encouraging: nearly universal endorsement of AI as a non-threatening interlocutor positively impacting subjects’ confidence and to the extent limited by time constraint, enhancing individual components of the IELTS paradigm. Moreover, significant linear relationship between individual anxiety survey items and overall IELTS scores at baseline was observed, lending a measure of validity to the construct developed for the occasion. In summary, it is felt that subject to further development and refinement, conversationally enhanced AI chatbots hold a significant promise toward reducing speech-related anxieties and learning inhibitions of English as a foreign language and thus merit further investigation toward this objective.

Keywords: Adult Learning, Artificial Intelligence, Foreign Language Anxiety, IELTS, Non-Human Interlocutor

Introduction
The organic growth and worldwide adoption of English as the most accessible form of international information exchange, in many forms of usage and utility, from scholarly, cultural, social, political as well as commercial and technological, drives home the urgency of its command by the wide swaths of population who are not native English speakers. A major obstacle to how smoothly this process develops is the natural inhibition felt by many people when self-perceived in a position of inadequacy or incompetence, triggering sense of threat, fear of ridicule and lowered self-esteem, namely, the Foreign Language Anxiety (FLA). It basically stems from exposing oneself to potentially negative judgment by one’s peers in a given social or business setting requiring efficient exchange of ideas and information, frequently resulting in avoidance of such situations and handicapping the communication channels. One possible approach to dealing with this issue is to expose otherwise fearful subjects to a competent English interlocutor of non-human provenance, thus eliminating the perceived threat of derogatory judgment, in hope that such interaction will liberate the subject from anxiety and inhibition in order to more readily engage in free and meaningful conversation. Thus, the notion of providing the subject with one of the widely available Artificial Intelligence (AI) voice-enabled agents or chatbots as colloquially known is seen to hold promise toward that goal, especially if deployed in the privacy of home environment. Fryer and Carpenter (2006, cited in Shawar & Atwell, 2007) claimed that chatbots could offer a way of language practice for learners without restraint of time and place.

At present, there is a paucity of published data either in support or contradicting this hypothesis and it therefore opens an information gap that this researcher deems worth pursuing. To reiterate, as well as indicate the source of the research question, can data be generated to support the anticipation that ad libitum English-spoken AI interaction can yield a meaningful reduction in foreign language anxiety, FLA. This is the motivation driving the study, design and results reported herein.

Literature Review
Culturally Mediated Anxiety in Thai Society
Ever since Geert Hofstede published his cultural dimensions model in 1970s, it has been the standard for assessing major cultural distinctions. Thus, the culture of a country can be appraised relative to the following six aspects: power distance index (high to low), individualism versus collectivism, masculinity versus femininity, uncertainty avoidance index (high to low), long-term versus short-term orientation, indulgence versus restraint. A closer look at the Thai cultural norms within this context demonstrates why the Thai are so inhibited in terms of oral communication. For one thing, Thailand scores relatively high on the uncertainty avoidance index, and Hofstede suggests that it is common in high UAI-scoring countries for people to undertake risky behavior simply in order to avoid failure, considered the worst possible outcome, with the well-known attendant phenomenon of “losing face”. Moreover, from the report on this model issued by Portland State University, several features pertinent to Thai culture can be observed. For example, Thailand scores relatively low in the aspect of individualism, which leads to the construct whereby a collectively oriented society places marked premium on collaboration, maintaining face, and in spirit of reciprocity, a great emphasis on massaging the other person's ego. This dynamics translates into a damaging scenario such that when communication in a foreign language is
unavoidable and presenting potential for errors, the Thai can be subject to great stresses and fears and will go to great lengths to avoid having to speak, regardless of cost.

**Foreign Language Anxiety**
Parallel to the seemingly inevitable expansion of English throughout the interconnected world, highlighting the communicative competence, many learners report being oppressed, stressed, worried, and anxious (Horwitz & Cope, 1986). Heightened anxiety does not necessarily correspond to lack of competence in other contexts, but within the foreign language learning scenario, a mental clock (MacIntyre & Gardner, 1989, as cited in Occhipinti, 2009; Horwitz, 1986) is turned on to show negative effects on learning outcome. Therefore, many researchers claim that the need for overcoming the foreign language anxiety (FLA) is paramount in order to ensure the learners’ maximal benefit from foreign language learning and instruction (Horwitz et al., 1986).

Horwitz et al (1986) developed a measurement tool for calculating levels of anxiety, termed foreign language anxiety scale (FLAS) comprising a 33-item anxiety measuring instrument. The researcher selected MacIntyre’s (1992) shortened form of FLAS (Horwitz, 1986), which reduced the original 33 items to 8 as having nearly the same internal consistency as per Alpha testing, as the designing reference for the measuring tool in this study, adapted to the workplace environment plus the addition of extra items to cover other aspects of interest specific to the research question.

**The Andragogy Model**
Knowles (1980) defines andragogy as the “art of science of helping adults learning” (p. 43). This theory takes as its subject the adult learner who is independent and self-directed. Adults have pragmatic motivation relating to real life. Further, they are goal oriented; learning must be purposeful and practical (Bye, Pushkar, & Conway, 2007). Therefore, adult learners are aware of the learning objectives and ready to take full responsibility for their own learning without teacher’s incentive. It is recognized that they will learn what they need to, given the motivation and interest. Another significant element discussed in the said theory is relationship between learner and facilitator. In order to make andragogical approach effective, according to Pratt (1993), it requires a psychological climate of mutual respect, collaboration, trust, support, openness, authenticity, pleasure, and humane treatment whereby it is the responsibility of a facilitator "to provide a caring, accepting, respecting, helping social atmosphere." (Knowles and Associates, 1984, p. 17). Therefore, and this point needs highlighting within the scope of this study, the relationship shouldn't be suppressing, threatening, or judgmental.

**Speech-enabled Artificial Intelligence, chatbot**
The artificial intelligence (AI) agent in this study is a speech-enabled, i.e., a chatbot. A chatbot system is a software program that interacts with users using natural language. There are interchangeable terms in the field having the same meaning, such as: machine conversation system, voice assistant, virtual agent, dialogue system. According to Shawar and Atwell (2007), the purpose of a chatbot system is to simulate human conversations, and the design normally integrates a language model and computational algorithms to emulate informal chat communication between a human language user and a computer using natural language. Chatbots have been applied in many fields for different purposes. According to Nordrum (2017) cited in Underwood (2017), voice interaction has improved more in the last 30 or so months than it did in its first 30 years,
word error rate for voice-recognition systems is now on par with humans and one might surmise, soon to surpass them. Currently, there is a process whereby the educators in all disciplines and levels are taking advantage of AI capabilities to harness them in their curricula in order to make the materials more accessible and ensure more efficient dissemination and delivery. Alemi, Meghdari, and Ghazisaeedy (2015) state that there was lower anxiety and a more positive attitude among students who claimed to have had great fun, and believed they were learning more effectively. Chang, Lee, Chao, Wang and Chenet (2016) investigate the possibility of using humanoid robots as instructional tools for teaching a second language in primary school. In her study, the students experienced excitement and participated enthusiastically. The positive feeling and motivational level for learning English are reported as higher than the traditional lecturing paradigm involving a human teacher. It can therefore be readily seen that AI has potential to contribute significantly to the pedagogical field in terms of improving learning outcomes, boosting motivation, and reducing foreign language anxiety.

Interestingly, Clark (2018) also described the relationship between chatbots and social constructivism. He states that it is the social constructivists, led by Vygotsky, who should celebrate bots the most. If knowledge is the internalization of social activity, then bots are facilitators to learners in social contexts and communication, since a chatbot is purposely designed to simulate intelligent human language interaction. Thus equipped, the learning processes can be expedited and enriched and the empowered learners fast-tracked toward greater maturity, self-direction and sustainability of knowledge acquisition as a life-long pursuit.

Methods
Participants
A large financial institution was approached and expressed interest regarding the study aims. The employees were canvassed by the Human Resources department and 40 in total were recruited into 2 self-selected parallel arms according to whether they wished to engage daily with the English-speaking AI agent. Those who lacked time or motivation comprised the Control group with the rest joining the AI intervention group. The recruitment took place at the beginning of April, 2019, subject to simple inclusion-exclusion criteria that the prospective participants were not rated at the extremities of IELTS speech testing scale, i.e., neither over-nor-under qualified, whereby they could not draw benefit from the said AI exposure.

Protocol and Interventions
The study followed a non-random, parallel design with two treatment arms of four weeks duration, the test arm consisting of an English-speaking AI agent (chatbot), widely disseminated and freely offered by Google, assigned to the Test group participants with instructions on how to download to their device of choice and to use it on ad-libitum basis, especially at home, in their spare time for pursuit of whichever topic is of interest. The control group were to follow their daily routines, with participation limited to fortnightly completion of a survey, same as the AI-group, designed to gauge their anxiety levels as regards English speaking activities. At baseline, week zero, all subjects took part in an IELTS English language assessment administered by a certified examiner for the main purpose of providing an external, independent mode of comparison with the 10-item anxiety survey developed by the investigator. The AI test group were further given a seven-item survey to establish their relationship and attitudes toward the notion of interacting freely and
privately with an expert non-human, English spoken interlocutor. Furthermore, the AI users were orally interviewed in order to uncover possibly important perspectives but overlooked in the scope of the anxiety and AI usage surveys. While the IELTS tester was blinded to the treatment allocation, the investigator could not be, in light of her survey administration and data gathering tasks. The study timeline saw the participants attending the initial IELTS test, completion of the 10-item anxiety gauging survey followed by downloading and instruction in AI chatbot, Google Assistant to the AI intervention group at week zero. Next, at the week two midpoint an interim seven-item AI attitudes survey was given to the test group. Finally, at week four, the second round of IELTS tests were administered to all 40 initial participants by the same examiner in order to maintain continuity, as well as the 10-item anxiety assessment survey. Additionally, the AI-exposed participants in the test group were given the seven-point AI-attitudes survey to complete as well as an orally administered interview to address any other remarks or insights regarding the use and frequency of AI interactions. As well, a one-time brief interview was administered to AI arm completers to gather their opinions regarding the life with the AI voice-enabled virtual assistant and its further potential. The data lock was applied immediately after collecting all the available completed surveys, although some were missing due to the work and travel requirements of the participants and therefore the analyzable data are somewhat incomplete.

**Statistical Analyses**

Data entry and production of tables was done through Excel spreadsheet generating program. The statistical analyses were run with the aid of R Core (x64) statistical software version, 3.6.0. The main types of analysis conducted with respect to these data, given their relative paucity that made more complex tasks such as Cronbach alpha and factor analysis to assess internal consistency of the survey items or model building not feasible, were of univariate type such as Pearson Product-Moment correlations and Student t-tests, both for one-sample and two-independent samples. The differences in the ordinal discrete data were assessed by way of Wilcoxon signed ranks test.

**Results**

The study cohort comprised 27 females and 10 males, 3 participants’ gender not recorded, likewise 37 of Thai ethnicity and 3 Chinese, ages from 23 to 50, mean of 33, all with post-secondary education credentials ranging from college to doctoral level. Of the initial 40 participants, 19 on Control and 21 on AI Test arms, their input at the end of study period at week four was as follows: IELTS speech test, 19 and 21 for a total of 40, and on the 10-point Anxiety survey, 12 on Control and 18 on AI Test arm. Moreover, 18 AI participants also responded to the 7-point AI attitudes survey. No difference in either Anxiety scores or IELTS scores at baseline between the two study groups were reported, $p>0.47$ and $p>0.22$ respectively, although the Control group’s mean initial IELTS score was higher than the AI test group’s, 5.2 vs. 4.5, providing a potential rationale for the participants’ self-selection choices. Pronounced linear relationships at baseline between the Anxiety survey items and IELTS scores were observed as follows

<table>
<thead>
<tr>
<th>Question</th>
<th>Correlation Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>$r=-.63$, $p\leq0.000$</td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>$r=-.55$, $p\leq0.000$</td>
<td></td>
</tr>
</tbody>
</table>

it embarrasses me to provide answers in English at my workplace
I feel confident when I speak in scenarios which require English
Moreover, the following correlations reaching significance at p<0.05 were recorded between changes from baseline to the study endpoint at week 4 between individual Anxiety items and IELTS overall scores:

| Q1  | N=18, r=.66, p≤0.003 | I am usually at ease in workplace where I need to speak English |
| Q2  | N=18, r=.52, p≤0.028 | it embarrasses me to provide answers in English at my workplace |
| Q4  | N=18, r=.69, p≤0.001 | I get nervous and confused when speaking or presenting in English |

In terms of summing up changes from baseline, the Control group reported a cumulative drop in Anxiety items of -5, an increase in IELTS score of 2, whereas the AI group registered a cumulative reduction in total Anxiety of -31 and increase in IELTS of 10. A one-tailed Wilcoxon signed ranks test of between-group comparisons of changes reached conventional significance of p<0.046 (Table 1), offering a degree of support for the paradigm of the extemporaneous use of speech-enabled AI agents to lower the sense of speech anxiety and aiding in quality of English conversational ability. The subject group assigned to AI exposure were asked to fill in responses to 7 additional survey items in order to gauge their attitude toward AI. Since there was no basis for comparison with the unexposed control group, no tests of hypothesis were carried out, and only the descriptive statistics are shown (Table 2). In addition, oral interviews were conducted on the AI participants to collect some of their impressions not otherwise recorded in either the Anxiety or AI questionnaires. These results were not analyzed statistically due to their essentially qualitative nature, only the frequency counts for the AI usage are presented (Tables 5 and 6). Nevertheless, it is felt that the content and frequency counts of comments were quite informative.

### Tables and Figures

**Table 1. Summary statistics by study group and week for anxiety survey items and IELTS scores, changes from baseline and non-parametric test of anxiety changes for 2 study groups**

<table>
<thead>
<tr>
<th>ANXIETY survey items (10)</th>
<th>IELTS categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Week</td>
</tr>
<tr>
<td>Control</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>change 4-0</td>
<td>4 12</td>
</tr>
<tr>
<td>t-statistic</td>
<td>4-0</td>
</tr>
<tr>
<td>p&lt;</td>
<td>0.159</td>
</tr>
<tr>
<td>net sum</td>
<td>3</td>
</tr>
<tr>
<td>AI</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>change 4-0</td>
<td>4 18</td>
</tr>
<tr>
<td>t-statistic</td>
<td>4-0</td>
</tr>
<tr>
<td>p&lt;</td>
<td>0.169</td>
</tr>
</tbody>
</table>
| net sum | -7 | -7 | 1 | -4 | -9 | 1 | 8 | -6 | -4 | -4 | 5 | 2 | 0 | 3 | 2.5 | -

Wilcoxon Signed-Ranks Test comparing changes (shaded sums) in Anxiety scores for Control and AI groups

| p< | 0.093 | 2-tailed test of z-value |
| p< | 0.046 | 1-tailed test of z-value |

Wilcoxon Signed-Ranks Test possible due to small sample size
Item codes: (highlighted items reverse-coded to provide ontological uniformity with other items)

Q1  I am usually at ease in workplace where I need to speak English
Q2  it embarrasses me to provide answers in English at my workplace
Q3  I can feel my heart pounding when I am going to be asked to speak English in discussions or meetings
Q4  I get nervous and confused when speaking or presenting in English
Q5  I feel confident when I speak in scenarios which require English
Q6  I always feel that other colleagues speak English better than I do
Q7  I prefer using English to Thai in meeting and discussing with my foreign colleagues
Q8  I don't enjoy practicing speaking English in my spare time
Q9  I think my speaking ability is at the level of …
Q10 I think the others perceive my speaking skills at the level of …

Table 2. AI-Attitudes items summary statistics on 5-point Likert scale

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Week 2 (n, mean±std)</th>
<th>Week 4 (n, mean±std)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11</td>
<td>21, 3.7±0.8</td>
<td>18, 3.6±0.9</td>
</tr>
<tr>
<td>Q12</td>
<td>21, 3.6±0.7</td>
<td>18, 3.4±0.8</td>
</tr>
<tr>
<td>Q13</td>
<td>21, 4.0±1.1</td>
<td>18, 4.2±0.9</td>
</tr>
<tr>
<td>Q14</td>
<td>21, 3.7±0.7</td>
<td>18, 3.5±0.9</td>
</tr>
<tr>
<td>Q15</td>
<td>21, 2.9±1.1</td>
<td>17, 3.2±1.0</td>
</tr>
<tr>
<td>Q16</td>
<td>21, 3.9±0.8</td>
<td>17, 4.0±0.6</td>
</tr>
<tr>
<td>Q17</td>
<td>21, 3.4±0.9</td>
<td>17, 3.7±0.7</td>
</tr>
</tbody>
</table>

Table 3. Pearson correlations of anxiety survey items with overall IELTS scores

<table>
<thead>
<tr>
<th>Q01</th>
<th>Q02</th>
<th>Q03</th>
<th>Q04</th>
<th>Q05</th>
<th>Q06</th>
<th>Q07</th>
<th>Q08</th>
<th>Q09</th>
<th>Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>40</td>
<td>40</td>
<td>39</td>
<td>40</td>
<td>40</td>
<td>39</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>r</td>
<td>-0.27</td>
<td>-0.63</td>
<td>-0.41</td>
<td>-0.28</td>
<td>-0.55</td>
<td>-0.42</td>
<td>-0.28</td>
<td>-0.35</td>
<td>-0.60</td>
</tr>
<tr>
<td>t</td>
<td>-1.71</td>
<td>-4.96</td>
<td>-2.71</td>
<td>-1.77</td>
<td>-4.01</td>
<td>-2.80</td>
<td>-1.82</td>
<td>-2.31</td>
<td>-4.66</td>
</tr>
<tr>
<td>p</td>
<td>&lt; 0.095</td>
<td>0.000</td>
<td>0.010</td>
<td>0.085</td>
<td>0.000</td>
<td>0.008</td>
<td>0.076</td>
<td>0.027</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 4. Correlations of changes in anxiety survey items with changes in overall IELTS scores

<table>
<thead>
<tr>
<th>Q01</th>
<th>Q02</th>
<th>Q03</th>
<th>Q04</th>
<th>Q05</th>
<th>Q06</th>
<th>Q07</th>
<th>Q08</th>
<th>Q09</th>
<th>Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>17</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>r</td>
<td>0.66</td>
<td>0.52</td>
<td>-0.06</td>
<td>0.69</td>
<td>0.04</td>
<td>0.05</td>
<td>-0.11</td>
<td>0.10</td>
<td>0.42</td>
</tr>
<tr>
<td>t</td>
<td>3.54</td>
<td>2.42</td>
<td>-0.25</td>
<td>3.87</td>
<td>0.15</td>
<td>0.18</td>
<td>-0.45</td>
<td>0.39</td>
<td>1.83</td>
</tr>
<tr>
<td>p</td>
<td>&lt; 0.003</td>
<td>0.028</td>
<td>0.803</td>
<td>0.001</td>
<td>0.882</td>
<td>0.861</td>
<td>0.662</td>
<td>0.699</td>
<td>0.086</td>
</tr>
</tbody>
</table>

Highlighted survey items reverse coded for Anxiety hypothesis testing.
Table 5. Oral interviews regarding AI usage not covered by the Anxiety or AI surveys
Frequency of daily use (number of sessions with AI chatbot)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Number of Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5</td>
<td>7</td>
</tr>
<tr>
<td>6 - 10</td>
<td>7</td>
</tr>
<tr>
<td>11 - 20</td>
<td>0</td>
</tr>
<tr>
<td>&gt;20</td>
<td>1</td>
</tr>
</tbody>
</table>

Frequency and type of topics of interactions with AI and their respective frequencies:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports</td>
<td>1</td>
</tr>
<tr>
<td>Fashion/clothes</td>
<td>2</td>
</tr>
<tr>
<td>History/culture/science</td>
<td>3</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Music/movies/entertainment</td>
<td>8</td>
</tr>
<tr>
<td>Travel/geography</td>
<td>8</td>
</tr>
<tr>
<td>Food</td>
<td>9</td>
</tr>
<tr>
<td>News/weather</td>
<td>12</td>
</tr>
<tr>
<td>Other (please name it)</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 6. Final feedback
Brief interview regarding the AI participants’ opinions of AI future prospects as a conversational tool to alleviate anxiety and promote English learning skillset:

<table>
<thead>
<tr>
<th>Response</th>
<th>Total</th>
<th>Full question wording</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>19</td>
<td>95% (Y/N) Does interaction with AI make you feel more relaxed or confident in speaking English?</td>
</tr>
<tr>
<td>N</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

What is your overall impression of interaction with AI:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>• I can learn English with AI</td>
</tr>
<tr>
<td>35%</td>
<td>• Chatting with AI cheers me up</td>
</tr>
<tr>
<td>65%</td>
<td>• Useful because AI provides relevant information in a conversational setting</td>
</tr>
<tr>
<td>5%</td>
<td>• I dislike talking with AI because it doesn’t provide correct answers</td>
</tr>
</tbody>
</table>

| Y        | 17    | 89% (Y/N) Do you feel AI can help improve your spoken English in the long term? |
| N        | 2     | 11%                                                                                   |

Figure 1. Linear relationship at baseline between Anxiety and IELTS levels (40 data points)
Discussion

The issues touched upon in this article, even though studied within a narrowly defined location and sampled segment of the general population, are likely to be to a significant portion representative of the global circumstances. That is to say that with ever encroaching importance of English, both for its own sake as a repository of world’s literature, culture, history and social sciences, as well as a lingua franca in commerce, politics, media and technological and scientific networks, it exerts a powerful incentive to a learner to master its various elements, including speech as assessed by IELTS test. The results may be somewhat skewed by the fact that the participants were self-selected according to their preference to either use or avoid exposure to English AI chatbot. The reasons may be manifold, including their attained level of language control, whereby those who felt sufficiently comfortable saw no need for further exertion or due to busy work schedule including travel abroad, conflicting with study requirements, provided self-invigilated control, i.e., were unwilling to engage with English-speaking AI agents in their free time. However, their English speech competence did not significantly differ at baseline. The principal motive behind this research question and study design is to address the feedback-driven linkage between speech anxiety and speech performance in a live environment as it relates to conversational English, whereby the psychological and physiological effects deprive the would-be user of even that degree of fluency of which they are otherwise perfectly capable. This relationship is exacerbated in East Asian cultures by the fact that extraversion and assertiveness are not necessarily regarded as positive personality traits and yet these cultures form the significant bulk of English as a second language (ESL) learners. Hence, the idea that if these populations were exposed to a capable English-speaking interlocutor that was at the same time socially benign, i.e., incapable of personal judgment and opprobrium, the learners would be able to devote more unimpeded time and effort to immerse themselves in free spoken English interaction. Even within the number of limitations constraining this study, namely small sample size, short time frame, paucity of financial and staffing support, relatively unsophisticated nature of the English chatbot, which is to say, Google Assistant as the best freely available option, the basic question posed has to an extent been answered in a largely positive way. To be noted is that all the baseline correlation coefficients relating anxiety to IELTS score are negative, which is to make two points: that the participants, insofar as they represent adult population are able to accurately coordinate their perceived speech anxiety to their actual English speaking ability as measured by IELTS and moreover, that the 10-item anxiety gauging survey designed specifically for this occasion functions satisfactorily, further refinements subject to internal tests of the construct consistency and validity notwithstanding. On the other hand, the coefficients corresponding to changes are positive, providing retrospective justification for the reverse coding of a number of Anxiety item scales and even more importantly, demonstrate the three-way linkage between extended use of AI chatbot, anxiety reduction over 4 week period (expressed as a positive number as per Likert scale coding of items tracking a negative emotion, so that subtracting a larger negative from a lesser one ends up on the plus side of zero) and actual, albeit small improvement in IELTS assessment. The claim is not promoted here that the modest speech improvement as measured by IELTS is due to salutary action of AI chatbot exposure but rather through reduction of anxiety that frees up the user’s already existing capacity for meaningful English discourse. This is still to be considered quite an encouraging development despite the aforementioned study limitations of sample size, study duration and AI shortcomings. To gain further insight into this dynamic, consider that Moore (2017) states: “How long does it take to improve an IELTS score? To go up 1 band in IELTS takes
most students approximately 200 to 300 hours of study, consisting of face-to-face tuition and guided self-study .” (P. 4). Referring to the “Fluency and Coherence” IELTS component in Table 3, while the Control group showed no change, the AI group presented 5 single band increases, almost reaching a statistical significance at p<0.061. Fluency and coherence would be the speech element most rapidly affected through free-wheeling conversational exchanges with the AI agent and of course, 4 weeks of intermittent exposure to AI cannot compare to 200-300 hours of intensive, directed language study facilitated by face-to-face tutors. Hopefully the results presented herein provide the proof of concept, vectors of further inquiry into the subject as well as pilot data for future study design, including sample size calculation and requisite time frames. As the development of AI abilities proceeds apace, the future research endeavors will have the advantage of a much more satisfactory potential for human-non-human AI interaction, hopefully offering in-depth, involved conversations rather than the present question-answer exchanges, a feature considered a hindrance to more binding engagement by the present participants. To this end, the AI users’ responses to the final brief interview and request for personal input of choice regarding their experience of the 4-week involvement with the AI chatbot are illuminating in the level of anticipatory, enthusiastic support for further improvements and prospects, in that 95% felt that the experience left them with a greater sense of confidence, i.e., lessened anxiety regarding their approach to oral English communication and 89% felt that it can improve their English speaking ability in future. It is the investigator’s opinion that this should inform the future efforts in this direction.

**Conclusion**

The present study was conceived and designed to address the question whether the detrimental effect of social anxiety or stage fright on acquisition and use of a foreign language, English in particular, can be palliated through extemporaneous exposure to a non-human, non-threatening, yet competent conversational partner, specifically, a speech-enabled artificial intelligence (AI) agent, commonly known as a chatbot. To this end, a relatively brief and limited experiment was designed involving 40 adult participants, self-selected into two equal sized groups, an unexposed control and an AI-provided group to freely interact with in privacy to see whether this unsupervised exposure aids in providing a degree of relief from public speech-related anxiety and thus, an associated improvement in English speaking ability. A variety of instruments were developed tailored to this aim, primarily a 10-item survey to record speech-related anxiety, concurrent with IELTS speech test administered by an independent, blinded, licensed examiner in order to establish correspondence between the two instruments over a 4-week period. The main conclusions drawn from this arrangement are as follows: the validity of the 10-item anxiety survey is supported by the IELTS results and furthermore, the test group of participants exposed to the AI agent reported markedly reduced anxiety levels after 4 weeks of usage compared to the unexposed control group as well as a mild trend in actual speaking improvement as reflected in IELTS test scores. A supporting range of questionnaires and interviews geared towards the AI test group was established for control purposes, the responses mostly demonstrating enthusiastic attitude toward the AI experience. It is felt that this brief experiment can provide further incentive toward future research based on larger samples, longer time frames and more advanced AI agents.
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References
APPENDIX A
Questionnaire

Background information:
Name: 
Nickname: 
Gender: M/F 
Age: (Bachelor, Master, Doctorate)
Educational level: (Bachelor, Master, Doctorate)

Speaking anxiety related items: For each item, indicate whether you (1) strongly disagree (2) disagree (3) neither agree nor disagree (4) agree or (5) strongly agree. Please choose the answer most suitable for you.
1 I am usually at ease in workplace where I need to speak English
2 It embarrasses me to provide answers in English in my workplace.
3 I can feel my heart pounding when I am going to be asked to speak English in discussions or meetings.
4 I get nervous and confused when speaking or presenting in English.
5 I feel confident when I speak in scenarios which require English.
6 I always feel that other colleagues speak English better than I do.
7 I prefer using English to Thai in meeting and discussing with my foreign colleagues.
8 I don’t enjoy practicing speaking English in my leisure time.

Please choose the level accordingly. Beginner=1, Lower-intermediate=2, Intermediate=3, Upper-intermediate=4, Advanced=5
9 I think my speaking ability is at the level of ___.
10 I think the others’ perceive my speaking skills at the level of ___.

AI (Artificial Intelligence) related questions: For each item, indicate whether you (1) strongly disagree (2) disagree (3) neither agree nor disagree (4) agree or (5) strongly agree. Please choose the answer most suitable for you.
11 I enjoy being in charge of conversation with my AI.
12 Talking with AI improves my English speaking.
13 I don’t feel nervous talking with AI.
14 I like interacting with AI.
15 AI provides me with human-like conversation.
16 I keep trying when AI has trouble understanding me.
Can Home Use of Speech-Enabled Artificial Intelligence

17 Talking with AI at home makes speaking English with human less scary.

APPENDIX B

Interview questions along the experiment period (week 2 and week 4):
1. Approximately how many sessions per day did you have with AI this week?
   a. 1-5
   b. 6-10
   c. 11-20
   d. More than 20

2. What are the main topics of conversation with AI? (please check all that apply)
   - Sports
   - Fashion/clothes
   - History/geography/culture/science
   - Health
   - Music/entertainment/movie
   - Travel/places
   - Food
   - News/weather
   - Other (please name it)

3. Can you give me some examples or experience that you feel interested/useful/funny/misunderstood with AI?

4. Are you feeling comfortable speaking English with AI? Why?

Final interview questions (week 4):
1. Does interaction with AI make you feel more relaxed or confident in speaking English?
   Yes/No

2. What is your overall impression of interaction with AI:
   a) I can learn English with AI
   b) Chatting with AI cheers me up
   c) Useful because AI provides relevant information in a conversational setting
   d) I don't like talking with AI because it doesn't provide correct answers

3. Do you feel AI can help improve your English speaking in the long term?
   Yes/No
Improving ESL Learners’ Grammar with Gamified-Learning

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Abstract
Aligning with the Industrial Revolution 4.0, an abundance of high-tech inventions has embarked their pavements in the educational field. Despite being under the 21st-century umbrella, the English language proficiency of Asian learners is still a few steps behind. Undeniably, most of the English as a Second Language (ESL) learners in Asian countries face challenges in learning ESL grammar. Grammar has been an intricate component to master due to its nature of complexity. This study aimed at exploring the effectiveness of using online language games in improving ESL learners’ grammar. A total of 30 students in a secondary school were involved in this research. The research design of the quasi-experimental method was used, employing the pre and post-test. Data were analyzed using percentages to compare the results after three interventions of gamified-learning known as Socrative, PowerPoint Challenge Game, and Kahoot! The main findings indicated that learners’ scores on the grammar post-test showed a significant increase from the pre-test. The improvements can be seen in the grading system, whereby, no participant obtained a grade D and E in the post-test as compared to the pre-test. Hence, the results depicted that gamified-learning is effective in teaching grammar to ESL learners.

Keywords: English as a second language (ESL), gamified-learning, grammar, online games, technology-enhanced language learning

1.0. Introduction

In this fast-paced world, education is a crucial aspect for an individual. The revolution of the world has impacted the educational field as well. The reformation in the educational field moves towards the Industrial Revolution 4.0, whereby 21st-century learning is proposed to achieve the aim of the National Philosophy of Malaysian Education (NPME), which is to produce a holistic individual through education (Ministry of Education Malaysia, 2013). In the current education system, Malaysia integrates the Common European Framework or Reference for Language (CEFR) into primary and secondary schools. This new curriculum sought to improve English proficiency among younger learners. "The reform holistically outlines the development of learners as competent users of the language to enable them to participate fully in both professional and academic contexts from schools up to tertiary level and also in teacher training” (Azman, 2016, p. 67). This curriculum is hypothesized to provide natural learning to learners.

Despite the reformation of curriculum, “Vocabulary acquisition in a foreign language is a problematic and time-consuming task” (Yunus, Salehi & Amini, 2016, p. 184). In learning the English language, a component which inhibits the desire for learners to learn the language is the English language’s grammar. Grammar is defined as a generalization in linguistics features, which forms a system of the language (Kapatsinski, 2014). Although learning the English language sounds easy, ESL learners still have complications in learning it (Misbah, Mohamad, Yunus & Ya’acob, 2017).

Since primary school, students are equipped with grammar knowledge, yet they still have a hard time learning English due to limited vocabulary in the language (Misbah et al., 2017). Aligning with the current trends in the Malaysian curriculum, the integration of Information Communications Technology (ICT) in schools is beneficial. Incorporating ICT in teaching and learning has proven to be a better teaching method as learners are more inclined towards the more relaxing atmosphere of learning (Noureddine, 2017).

However, grammar activities designed in the Malaysian English textbook for secondary schools are catered for the conventional teaching method (Siaw-Fong, 2017). This shows that although the curriculum in Malaysian Education has moved towards 21st-century learning, the content is still designed in an old-fashioned way. Therefore, this study aims to investigate the effectiveness of using online language games in improving Malaysian’s secondary school students’ English grammar.

1.1. Computer Assisted Language Learning

Based on the development of the Computer Assisted Language Learning (CALL), beginning from email in 1988, CALL has developed since to become a better learning tool for teachers in language classrooms (Padmavathi, 2013). Online games can be used to promote better learning for students. With adequate facilitation from the teacher, online tools are capable to enhance the language of learners (Krystalli, Arvanitis & Panagiotidis, 2014). Thus, incorporating games into teaching will ensure the effectiveness of the learning session.
1.1.2. ICT and Language Learning

The term Information Communications and Technology (ICT) has been used widely in communities. ICT has made life easier for many people. Regardless of the various functions of ICT, currently, ICT serves as an educational tool. Noureddine (2017) states that positive language learning can be achieved with the integration of technology. Hence, many educationists start using ICT to monitor and accompany their teaching and learning session. "Due to the fact that students are familiar with technology and they will learn better within the technology-based environment, the issue of ICT integration in schools, specifically in the classroom is vital" (Ghavifekr & Rosdy, 2015, p. 175). This shows that ICT provides a positive effect on education by providing an opportunity for learners to monitor their own learning. Yunus (2018) indicates that the reformation of technology has beneficially changed the roles of teachers and allows more learner-centered activities to be carried out.

1.1.3. Online Language Games

Online games or digital games vary in terms of the number of players and categories. Digital games have many types and categories, from individual to large groups and from educational to fantasy respectively (Kim, Song, & Burton, 2018; Chun, Kern, & Smith, 2016). Additionally, "language game is a game with rules that have linguistic aims and they are agreed with the participants" (Ibrahim, 2016, p. 54). Therefore, online language game brings the meaning of a competitive platform which includes linguistic elements in a game.

Games are said to be beneficial in education. The main reason for a game to be a successful tool in aiding learning is due to the fact that games provide a competitive platform for learners to fully engage in the game (Mekler, Rank, Steinemann & Lacovides, 2016; Bullard & Anderson, 2014). This means that many educators nowadays prefer to use a more stimulating way to deliver their lessons, rather than the talk-and-chalk method. Concepts and experience in the real world can be fostered through games, which proves to be an effective tool for learning (Hashim, 2018; Santhanam, Liu & Shen, 2015). As an educator in 21st-century learning, transforming a classroom into a digital learning environment is crucial.

Education changes over time as can be seen nowadays, where the old method of a teacher-centered classroom has been changed to a student-centered classroom. “Indeed, it is necessary for teachers to possess high adaptability towards changes as changes bring new doors of learning” (Ling & Yunus, 2017, p. 15). Teachers should adhere to the ever-changing education to ensure learners achieve a maximized learning experience. With regards to the evolution of technology, a firm belief that learning can be enhanced using games is ignited (Wiggins, 2016; Krystalli et al., 2014). Thus, online language games can cater to independent learning as well as enhancing the language of learners.

1.2. Grammar in ESL Learning

Grammar is the basics of the English language, which allows ESL learners to read, write, speak and understand English effectively (Cam & Tran, 2017; Turkmen & Ayden, 2016). Grammar is a complex component in a language, whereby teaching and learning of grammar are difficult. As stated by Mart (2013), the grammar of the English language is taught in the target language of learners because it can foster a better understanding and promotes independent
learning. Ibrahim (2016) emphasizes that in order to accomplish a higher proficiency in ESL, grammar learning is a must. The teaching of grammar should be fun to provide learners with better performance. As further supported by Yunus, Nordin, Salehi, Sun and Embi (2013), learners are able to improve their vocabulary acquisition through ICT.

1.3. Related Studies

Previous studies have shown the effectiveness of gamified-learning in improving grammar. Grammar is a complex aspect in ESL. Still, when teachers incorporate technology in the classroom, such as online games, learners' grammar learning seems to show improvement. Based on the research by Perveen, Asif, Mehmood, Khan, and Iqbal (2013), students who learn through games acquire more vocabularies. The reason lies in the motivation itself (Hamari & Hassan, 2019; Flores, 2015), whereby it is stated that students are more motivated and eager to learn while playing. Games in the language classroom involve the active participation of students in learning, which in return provides a solid platform for learners to effectively and positively learn grammar in ESL (Leaning, 2015; Hamari, Koivisto & Sarsa, 2014).

In another related study, Rao (2014) emphasizes that students gain more words and learn the correct structures of English when they are engaged in games. It is stated that English games promote an inexplicable learning experience where students keep looking forward to learn new words. Online language games also provide a better version of the English language, other than engaging students in ESL learning (Mullins & Sabherwal, 2018). Furthermore, there is a difference in the way students acquire vocabularies, whereby they obtain more words based on online games, compared to the traditional method of teaching (Castaneda & Cho, 2016; Reitz, Sohny & Lochmann, 2016; Aslanabadi & Rasouli, 2013). According to this research, it can be seen that ESL learners tend to learn more with the aid of technology because they find it to be more exciting and appealing (Raba, 2014; Liu, Li & Santhanam, 2013). A traditional method of teaching is not that effective anymore in imparting knowledge of grammar to students.

In a study by Bullard and Anderson (2014), gamified-learning manages to improve learners' achievement with regards to the pre and post-test carried out. A similar result is also discovered in a study by Wichadee and Pattanapichet (2018). Learners perform better after the interventions due to their engagement in the games (Poondej & Lerdpornkulrat, 2016). Learning through a fun environment retains a better memory of the lesson learned. This study also portrays the effectiveness of using online language games in improving learners’ grammar skills.

To conclude, online language game is a current method that can be used by teachers to improve learners’ grammar in ESL. There is no doubt with the development of technology, it is easier to monitor the effectiveness of the teaching and learning session in schools.

1.4. Objective

This study aims to investigate the effectiveness of using online language games in improving Malaysian’s secondary school students’ English grammar.
1.5. Methodology

This research employed a quasi-experimental study, which included a pre-test with three sessions of intervention, and a post-test. A total of 30 students from a suburban secondary school in Malaysia were the targeted participants for this research. The level of proficiency of the participants was between intermediate to low. The research instruments include giving out a pre-test of 20 grammar questions, followed by three interventions using various online language games such as Socrative, PowerPoint Challenge Game, and Kahoot! for three consecutive weeks, respectively. A week after the last intervention, a post-test of 20 grammar questions was carried out. Data collected were recorded in frequency count and scores from the tests were converted into percentages as standardized by the Ministry of Education Malaysia, whereby each score belongs to a different grade.

1.6. Results

This study has investigated the effectiveness of using gamified-learning in improving ESL learners’ grammar. Table 1 and Figure 1 present the findings of this study.

Based on Table 1 and Figure 1, there was an increase in the results of the participants’ post-test. For grade A, it showed an increase by one participant from the pre-test. For grade B, in the pre-test, only five participants obtained the grade, while in post-test, a total of 16 participants managed to get the grade. This shows an increase among participants, who received a grade B. The number of participants who obtained a grade C in the pre-test were 15, whereby in post-test, there were only 12. The decline in this figure shows that the three participants received a better grade in their post-test as compared to their pre-test results. In other words, online language games improve ESL learners’ grammar. Eight participants scored a grade D for their pre-tests, but in the post-test, none of the participants received this grade. Same goes for grade E, where one participant scored the grade for pre-test, but none of them scored the same grade for post-test. The results proved that gamified-learning is able to improve ESL grammar of learners. Most of the participants received a better grade and they were able to improve themselves in grammar learning. Using online language games, which is also a technology-based learning tool, participants benefit more from it.

1.7. Discussion

The results are analyzed in relation to the aim proposed based on the comparison results of the pre and post-test. First, the increasing scores from the pre-test proved that all interventions carried out were effective, which also adheres to the aim of this paper. Using the interventions in the form of online language games, the results can be seen as positive. It can also be seen that online language game improves grammar to a certain extent whereby participants no longer get a grade D or E for post-test. The findings from a study by Perveen et al. (2013) also proves that the achievement of students unexpectedly increased, in terms of vocabulary acquisition when students learn through the use of games. The reason behind the improvement is due to the motivating intervention (Flores, 2015). Ghavifekr and Rosdy (2015) support this claim by stating that students learn better when they are aroused in the technology-based teaching method used by the teacher. Aligning with the improved results, gamified-learning is effective.

Many students are able to improve their grammar in ESL with the aid of online language games because online language games condone to the 21st-century learning (Mullins &
Improving ESL Learners’ Grammar with Gamified-Learning

Hashim, Rafiq & Yunus

Sabberwal, 2018; Poondej & Lerdpornkulrat, 2016; Learning, 2015). The integration of technology in the classroom adheres to the tech-savvy learners’ needs (Hashim, 2018; Raba, 2014; Sohny & Lochmann, 2016). Due to the nature of gamified-learning, learners are able to improve themselves. Relating to a study by Rao (2014), he mentions that the effectiveness of using games to improve learners’ achievement, lies in the engagement of learners towards learning and playing at the same time. Additionally, Aslanabadi and Rasouli (2013) state that students’ achievement in grammar is closely related to their motivation and eagerness to win a game, which indirectly impacted their results. The results from these two studies show similar results to this study on the effectiveness of using gamified-learning in improving grammar.

Learners, especially school students, currently known as the alpha generation, grow up with technology. For them, without technology, they are unable to do something brilliantly. "For these learners, technology is not considered an accessory to life, but is viewed as a way of life" (Hashim, 2018, p. 2). Besides, it can be said that students like something new in their normal classroom routine. Bullard and Anderson (2014) carry out a study and the results obtained are closely related to this study, whereby learners perform better in the grammar post-test due to their interest and active participation in ESL classroom. Thus, when students learn something in a new way, they will appreciate it and their learning spirit will increase as well (Castaneda & Cho, 2016; Reitz et al., 2016).

Learners are more independent in fostering their own learning, especially when they are motivated and have interest in the learning process, which can be aroused using ICT (Yunus et al., 2013). It can be said that motivation plays a vital role in the success of a learner in ESL learning. Tahaineh and Dana (2013) state that motivation highly affects the success of learners in learning a second language and they also implore teachers to use motivating teaching methods in the classroom. In this paper, an online language game is a motivating tool which makes learners obtain better results and further proves that online language games improve ESL grammar learning.

1.8. Conclusion

Based on the findings of this paper, it can be concluded that gamified-learning is effective in terms of grammar achievement. Learners are able to obtain better results when they learn grammar using online language games. Some of the factors involved in positive academic achievement include motivation and fun. An online language game is fun, to begin with. Due to that, it motivates learners in playing the game. When learners are interested in playing, their confidence level as well as their self-esteem in learning grammar increases. The traditional method of teaching is unfavorable for ESL learners. This in return provides a positive feeling towards learning grammar through online games. As learners have a positive attitude towards learning ESL grammar, they benefit from it by gaining better results. Therefore, it would be best if teachers start using online language games in teaching ESL grammar. It is crucial for teachers to effectively integrate technology in aiding their lessons for an efficient learning outcome. Overall, with the rapid advancement of technology and gadgets, ESL learners will benefit massively through gamified-learning.
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References


Appendix A.

**Table 1. Pre-test and post-test results**

<table>
<thead>
<tr>
<th>Grades</th>
<th>Range of scores (%)</th>
<th>No. of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-test</td>
</tr>
<tr>
<td>A</td>
<td>80 – 100</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>65 – 79</td>
<td>5</td>
</tr>
<tr>
<td>C</td>
<td>50 – 64</td>
<td>15</td>
</tr>
</tbody>
</table>
Appendix B.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Pre-test Results</th>
<th>Post-test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>40 – 49</td>
<td>8</td>
</tr>
<tr>
<td>E</td>
<td>0 – 39</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

*Figure 1. Pre-test and post-test results*
Effectiveness of Project-Web Learning Approach in the Development of Action Research Skills among Master’s Students in Oman

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&
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Abstract
The study aimed to prepare a program in action research based on Project-Web Learning Approach, and investigate the effectiveness of this program to develop the action research skills for master's students at Dhofar University in Oman. The study was based on the semi-experimental design of one group (pre-post application). The study sample comprised (27) master’s students of Education Department in College of Arts and Applied Science of Dhofar University. Data were collected via the test of action research skills for the sample in the courses of educational research and seminar in curriculum & instruction. The study was carried out during 13 weeks. Data were analyzed using means, standard divisions, and T test. The study concluded that there was a significant difference at (0.01) between the mean grades of students in the pre-test of action research and that of the post-test in favor of the post-test. In light of the results, the study recommended preparing the content of all courses to master's students in accordance with the Project-web learning Approach, and improving the instructors’ performance to develop action research skills for their students.

Keywords: action Research, electronic learning, project learning, project-web learning, masters students, Oman.

Cite as: Elsayed, A. M. A. (2019). Effectiveness of Project-Web Learning Approach in the Development of Action Research Skills among Master’s Students in Oman. Arab World English Journal (AWEJ) Special Issue on CALL (5). 51-64 DOI: https://dx.doi.org/10.24093/awej/call5.5
1. Introduction
Educational research is very important for both developed and developing countries and societies, and it is the basis for development in all educational fields, as it keeps educational institutions away from arbitrary actions that may happen to be right in some cases but wrong in others.

Action research is one of the types of educational research that has recently emerged in educational institutions that offer distinguished professional work. It has become one of the styles of professional development of the teachers, as it encourages them to think about their practices, examine their performance and specify the problems that face them to solve them using an appropriate scientific methodology (Al-Maziny &Al-Mazroua, 2010).

Action research depends on the researcher’s pondering at the practices of the educational field, in order to make a better understanding of the educational process. Then, it makes positive changes in the teacher’ level, and school administration.

Due to the importance of action research in the professional development of teachers, many conferences were held, including three consecutive international conferences about action research in United Kingdom at 1990, 1992, and 1994 (Obeidi, 2010). College of Education in Qatar University also organized four consecutive conferences to discuss the concepts and skills of action research at 2008, 2009, 2010, and 2012 (Elsayed & Al-Amri, 2015).

Arab Thought Foundation in Lebanon also presented several projects that aimed at developing teachers' skills in the use of action research such as: Tammam Project (1) and Tammam Project (2). These projects have been implemented in Lebanon, Saudi Arabia, Egypt and Jordan (Arab Thought Institute, 2013).

Ministry of Education in Oman focused on promoting action research skills for Omani teachers and staff in the field of education through educational symposiums, educational meetings, and educational versions. As the Ministry of Education in Oman agreed with the International Reading Association to implement a training program to develop the research skills of the senior teachers, supervisors, and specialists training in the ministry was carried out during the period from 26/2/2011 to 03/03/2011 (Al-Baluchi, 2011).

In light of the development of modern technologies, there is a need for modern educational techniques that guide the preparation of students and teachers in the knowledge society so that there would be an opportunity to publish courses online to be available to students at any time and from any place (Zawaidi, 2014).

Project-Web Learning Approach is one of the most appropriate approaches that can be used to train and prepare students and teachers. It is possible to employ and use electronic web-based tools to collaborate and engage students in the implementation of these projects and to make use of all electronic resources available through the web to access information and exchange them electronically among students (Arif, 2015).
Project-based learning across the web is one of the educational approaches that have emerged in recent years as a result of the integration of e-learning and project-based learning, which is seen as an integrated, interactive and influential learning process (Saraya, 2012).

Project-based learning across the web is based on constructional learning approaches, which emphasize that learning is an active, constructive, contemplative process achieved in a realistic social context by practicing social negotiation skills within real learning environments rich in multiple learning resources. These approaches include several strategies and educational systems, the most important of which are problem-based learning, collaborative learning, situational learning, deep learning, discovery learning (Ching, 2016).

Mohamed (2018) believes that training students in the development and implementation of action research through Project-Web Learning Approach may contribute to developing awareness of action research and reducing their teaching anxiety.

Therefore, the present study is trying to use the Project-Web Learning Approach to develop the action research skills among Masters Students in Oman.

2. Problem Statement

It was clear to the researcher through his long practical experience in teaching the courses of educational research, educational statistics, scientific seminar in curriculum & instruction and general teaching theory and strategies- advance level that most of the master's students at Dhofar University have a low level of action research skills. This is confirmed by the results of the tests, where the results of these students were lower in the questions related to the action research skills compared to the other questions in the tests.

This coincided with the results of several studies, including (Al-Shanfari, 2012), (Elsayed & Al-Amry, 2015), (Al-Hussaini, 2018), which indicated a low level of action research skills among individuals in various educational disciplines in the Sultanate of Oman.

Several studies, including (Stozhko, et al., 2015), (Pilten & Pilten, 2017), (Mohamed, 2018) have recommended the need to develop students' action research skills and the need to use new approaches and strategies based on web applications, especially project-based learning through the web, for their great importance and educational benefits and it is also the most appropriate approach to the development of procedural research skills.

So the present study attempts to answer the following research questions:
1. What is the proposed program based on Project-Web Learning Approach in the development of action research skills among Masters Students in Oman?
2. What is the effectiveness of the proposed program based on Project-Web Learning Approach in the development of action research skills among Masters Students in Oman?

3. Study Limit

The limits of the study were as follows:
3.1 The following action research skills: selecting the research problem, reviewing the literature and writing the hypotheses, preparing the proposal of the research, carrying out the research procedures, and writing the research report.

3.2 The approach of learning based on collaborative projects across the web.

3.3 Master students in education department in college of arts and applied science at Dhofar University.

3.4 The study was carried out during the academic years (2106/2017 and 2017/2018).

4. Terminology of Study

4.1 Proposed Program

A set of targeted and planned educational modules and their objectives, procedures, activities, and evaluation methods) based on project-based learning across the web to develop the research skills of master students in education department at Dhofar University.

4.2 Project-Web learning

Learning based on a set of organized procedures and activities, which enables the master student in education department at Dhofar University to conduct a participatory action research based on tools and techniques of interaction in a variety of electronic learning environment under the supervision and guidance of the researcher in order to develop their action research skills.

4.3 Action Research:

An organized intellectual process based on specific scientific procedures carried out by the master student in education department at Dhofar University for the treatment of a problem facing him or the development of his professional performance.

4.4 Action Research Skills:

The ability of the master student in education department at Dhofar University to conduct action research with precision and proficiency, through the exercise of skills (selecting the research problem, reviewing the literature and writing the hypotheses, preparing the proposal of the research, carrying out the research procedures, and writing the research report). It is measured by the degree obtained by the student in action research skills test prepared for this purpose.

5. Study Hypothesis

1. There is a significant difference at (0.01) between the pre and post application of action research skills test on the study sample in favor of the post application.

6. Literature Review

6.1 Project-Web Learning Approach:

Project-based learning across the web is an e-learning approach that employs all the potential of the web, enabling students to gain experience, communicate purposefully, engage, interact and collaborate with their peers electronically to achieve learning goals through clear steps and specific tasks for each individual in the work group.
The learning of projects through the web is based on scientific principles based on the principles of constructivism theory as it is a learning strategy centered on the learner who builds his own knowledge by practice and addresses real problems (Mubarez, 2014).

It is defined as a typical educational process for practicing social negotiation skills among students when implementing the educational project plan through the use of synchronous and asynchronous electronic communication tools such as e-mail and discussion forums (Shadiev & Huany, 2015, 124).

Mohammed (2013, p. 357) defines it as an instructional model focused on learner-centered learning that allows him or her to work independently or in small collaborative groups to build their own learning. It is used to provide subjects that require research and inquiry, to enhance collaborative work and decision-making skills.

In this regard, Mohammed (2018) explains that project-based learning across the web allows students to participate positively in the educational situation through their research, application and employment of the knowledge and skills acquired in real situations under teacher supervision and guidance. So it provides students with a deeper knowledge of the curriculum, and it is an effective way to integrate technology into the educational process to build positive communication and collaborative relationships among students.

There are two types of project-based learning across the web. The first is learning based on individual projects across the web, where students work individually, meaning that each student prepares a project different from other projects or is the same project but each student is working individually. The second is learning based on collaborative projects across the web, where projects are implemented in groups. Each group assigned a specific project to be implemented, and the work is divided into one group so that each student has a specific role to complete the work of the rest of the group (Albritton, 2016).

Projects are implemented across the web in a series of stages (Tilchin & Kittany, 2016; Riyanti, 2017; Mohamed, 2018):

- Project Selection Phase, taking into account that the project is suitable for the students' tendencies and abilities. It is implementable, achieves the objectives of the educational material and returns educational benefit to the student.
- Project planning stage. Students will develop the project implementation plan under the supervision of the teacher. The students will be given the freedom to distribute their roles and responsibilities in collecting information, designing the project plan and its stages. The plan will be presented to the teacher for approval.
- Project implementation stage: Each student will implement the relevant part of the plan, record the results reached by the team and identify the problems encountered to overcome them under the supervision of the teacher, with continuous guidance from the teacher.
- Project follow-up and evaluation stage: The students present their projects, and the teacher and peers evaluate each project so that each student sees the outcome of his effort within the group.
effort. At this stage, each group also provides a report on the educational benefits of the project, the problems encountered and how it was resolved.

It is clear from the above that it is important to introduce project-based learning in the educational process, and learning based on collaborative projects across the web is also distinguished from learning based on individual projects across the web in many aspects such as providing cooperation among students, benefiting from each other, and quality in the final product. Therefore, the current study focuses on collaborative projects across the web to develop action research skills among master students at Dhofar University.

6.2 Action Research Skills

There are several names for action research in theoretical literature, some of them are called the situational research, and some of them are called the work research or the action research, and it is also called the research performance or research for improvement.

Johnson (1993, p. 25) defines action research as "a thoughtful and directed investigation towards solving a problem, and can be done by an individual or a group". This type is characterized by forming helical rings each one of which includes (identifying the problem, collecting organized data, thinking, analysis, taking action in the light of the data and finally redefine the problem)

Yousef (2014, p. 102) indicates that it is "a participatory activity of teachers to develop their performances and educational practices or solve problems in the educational process by reflecting on their teaching practices to make the desired change in the educational process".

Elsayed & Al-Amry (2015, p.197) define action research as "a kind of investigation conducted by teachers, and requires them to use self-reflection of their teaching practices, ways of their students' learning, and problems about these aspects, to find scientific solutions to these problems in order to improve the educational process, and raise the efficiency of students".

There are three types of action research depending on the number of individuals involved. The first is the individual procedural research, which addresses a particular problem facing a teacher within the classroom and tries to reach a solution to that problem. The second is the cooperative procedural research, which deals with a common problem among a number of teachers, and there is an exchange of experiences and communication between them to solve this problem. The third is the procedural research at the level of the educational institution, and this research is shared by all teachers in the educational institution in order to solve a problem to improve their performance, and thus improve the overall performance of the institution (Morales, 2016).

Through the analysis of several studies, such as: Fernandez & Adelina (2014), Elsayed & Al-Amry (2015), Miller (2017), the skills of action research can be identified in the following figure:
**Figure 1** Action Research Skills  
(Elsayed & Al-Amry, 2015)
It is clear from the above that project-based learning steps across the web are highly compatible with the steps of the preparation and implementation of action research.

7. Methodology

In this part the researcher describes the method and procedures that were followed in the current study, as he deals with a description of the study sample, tools, and procedures to ensure validity and reliability. Moreover, he discusses the statistical treatments used in the data analysis.

7.1 Sample of the Study

The study sample comprised (27) master’s students of Education Department in College of Arts and Applied Sciences at Dhofar University.

7.2 Study materials and tools

7.2.1 Proposed program based on Project-Web learning

The proposed program has been prepared according to the following steps:

- **Analysis Stage:** This stage included an analysis of the educational needs of the master students, which was the lack of students’ research skills. And then analyze the characteristics of the students, which consisted in the acquisition of students' e-learning skills. And finally the analysis of the characteristics of the educational environment, which was the availability of e-learning requirements in the classroom.

- **Design Stage:** This stage included the following steps:
  1. Defining the objectives of the program: The overall objective of the program is to develop the action research skills of the Master's students at Dhofar University. The procedural objectives of each of the program's modules have been determined, as well as the specific objectives for each session of the program.
  2. Identifying and organizing the content of the program: The content of the program was determined in light of its educational objectives. It included five educational modules related to the research skills that were previously devised in figure (1), which consisted in selecting the research problem, reviewing the literature and writing the hypotheses, preparing the proposal of the research, carrying out the research procedures and writing the research report. The content is organized in the form of educational modules, and each module includes a number of training sessions that depend on self-learning.
  3. Identifying Media and Educational Activities: A number of multimedia and learning resources have been identified for the contents of the program, represented by presentations, pdf text files, video clips, synchronous virtual chapters, and thematic enrichment sites.
  4. Identifying learning methods and strategies: The proposed program included the following learning strategies and styles: electronic discussion, e-learning platforms, online learning, electronic brainstorming, electronic lecture, self-learning, collaborative learning, and training workshops.
  5. Identifying training phases using project-based learning across the web: This step has been implemented through selecting the title of action research project, planning for the preparation of action research project, implementation of the action research project and evaluation of action research project.
Development stage: This stage included preparing multimedia and learning resources for each topic in the content of the program, creating an educational forum to allow for dialogue and discussion among students, and using virtual classes to communicate between groups and provide educational content, preparing working paper questions for each program topic as a construction evaluation and preparing the final test in the action research skills as a final evaluation.

Evaluation stage: This stage was carried out through the construction evaluation which was carried out at each stage of the project preparation, and the final evaluation which was carried out at the end of the project by comparing the post-application and the pre-application of action research skills on the study sample.

Preparing the program in the final image: To check the validity of the program, this program was presented to five faculty members specialized in curriculum, teaching methods and technology and it was modified according to their suggestions, so that the program in its final form is a component of the training manual, and the working papers.

7.2.2 Action Research Skills Test

The researcher built a test in order to measure the students' action research skills. This test consisted of twenty-five questions related to the five skills of action research skills, depending on the relative weight of each skill and the number of sub-skills. Therefore, four questions were assigned to the skills of selecting the research problem, reviewing the literature and writing the hypotheses, and writing the research report. Other seven questions were assigned to the skill of preparing the proposal of the research, and six questions were assigned to the skill of carrying out the research procedure. To ensure the validity, this test was presented to six faculty members specialized in curriculum, teaching methods and technology and some items were modified based on their suggestions. The degree of agreement was found to be at (89%). To check the reliability, the researcher carried out the test as a pilot study on (20) master students in college of commerce and business administration. Reliability coefficient was calculated for the test using the Cronbach’s Alpha equation and was found to be at (0.92). One or two marks were given for correct answer and zero mark for the wrong answer. Thus, the maximum score for the test is (50) marks, while the minimum is (0), taking into account that the time of the exam was (120) minutes.

7.3 Variables

Study variables are defined in the proposed program based on project learning across the web as an independent variable, and action research skills as a dependent variable.

7.4 Study Design

<table>
<thead>
<tr>
<th>X1</th>
<th>O</th>
<th>X2</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1: Performance on the pre-test of action research skills.</td>
<td>O: Treatment for the sample (proposed program).</td>
<td>X2: Performance on the post-test of action research skills.</td>
</tr>
</tbody>
</table>

7.5 Experimental Treatment:

After selecting the study sample, they were divided into groups of five students per group. Each group prepares an action research to address a particular problem in a participatory manner. The
sample was pre-tested by applying action research skills test prior to their training on the proposed program, followed by an introductory meeting with them to give a comprehensive idea of the proposed training program and train them. After the completion of the training program, each group of students was assigned the task of conducting a participatory action research on one of the problems in their field of specialization. In the end, the test of action research skills was applied to the study sample.

7.6 Statistical Treatment:
Data were analyzed using mean, standard division, T test, and $\eta^2$ using SPSS version 22.

8. Results
8.1 Results related to the first question
The first question is: What is the proposed program based on Project-Web Learning Approach in the development of action research skills among Masters Students in Oman? This question was answered within the literature review of the current study (P. 8), where the researcher prepared a proposed program based on Project-Web learning approach in a scientific method according to five basic steps, namely: analysis stage, design stage, development stage, evaluation stage, and preparing the program in the final image.

8.2 Results related to the second question
The second question is: What is the effectiveness of the proposed program based on Project-Web Learning Approach in the development of action research skills among Masters Students in Oman?

The hypothesis below emerged from the above question:
There is a significant difference at (0.01) between the pre and post application of action research skills test on the study sample in favor of the post application.

To verify the validity of the above hypothesis, the researcher found the significance of the differences between the degrees of pre and post application to the test of action research skills on the study sample, as shown in Table 1.

<table>
<thead>
<tr>
<th>Action Research Skills Test</th>
<th>Pre- Test</th>
<th>Post- Test</th>
<th>T test</th>
<th>Sig.</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Std. Div</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>1. Selecting the research problem</td>
<td>27</td>
<td>3.33</td>
<td>1.18</td>
<td>27</td>
<td>7.23</td>
</tr>
<tr>
<td>2. Reviewing the literature and writing the hypotheses</td>
<td>27</td>
<td>3.67</td>
<td>1.18</td>
<td>27</td>
<td>7.67</td>
</tr>
<tr>
<td>3. Preparing the proposal of the research</td>
<td>27</td>
<td>9.80</td>
<td>1.50</td>
<td>27</td>
<td>13.50</td>
</tr>
<tr>
<td>4. Carrying out the research procedure</td>
<td>27</td>
<td>7.50</td>
<td>1.48</td>
<td>27</td>
<td>11.40</td>
</tr>
<tr>
<td>5. Writing the research report</td>
<td>27</td>
<td>2.60</td>
<td>1.67</td>
<td>27</td>
<td>6.87</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>19.97</strong></td>
<td><strong>4.33</strong></td>
<td><strong>27</strong></td>
<td><strong>43.53</strong></td>
</tr>
</tbody>
</table>
The table 1 shows the following:
- There are substantial differences in the mean grades of the pretest and the posttest for action research skills test in favor of the pretest at each skill separately and the test as a whole.
- There are significant differences at (0.01) between the mean grades of the pretest and the posttest for action research skills test in favor of the pretest at each skill separately and the test as a whole.
- The effect size ($\eta^2$) of the proposed program based on Project-Web Learning Approach on action research skills was high at each skill of action research skills separately and the skills as a whole. So it can be said that the proposed program based on Project-Web Learning Approach led to the development of action research skills for the participants of the study. Therefore, the study hypothesis is accepted.

9. Discussion
The results of this study can be attributed to:
- The continuous and varied training offered to students through electronic participation groups made the discussions rich, and the students benefited from each other and their teacher, resulting in an improvement in the level of their research skills.
- The proposed program offered a variety of knowledge and skills to students about action research through a variety of interesting electronic resources, thus encouraging them to do more to learn all about action researches.
- Various training activities and multiple models of action research provided students with a broad understanding of different research approaches to action research, and the right criteria for performing each skill.
- Intensive electronic training of students on the skills of action research skills, and the continuous evaluation by the researcher led to the students' knowledge of weaknesses in the implementation of research skills one by one, and then enhancement and improvement of these skills continuously. Therefore, all their research skills improved without exception.

However, many studies have found that the Project-Web Learning Approach has been effective in developing many different professional, cognitive and skills aspects of students and teachers, especially action research skills, such as: (Mohamed, 2018; Risnani, 2017; Kapenieks, 2016).

10. Conclusion
The researcher in the current study has built a program in action research based on learning projects across the web for the master students at Dhofar University according to the following steps: analysis stage, design stage, development stage, evaluation stage, and preparing the program in the final image. This program led to the development of action research skills for the participants of the study. Action research skills that have been developed are: selecting the research problem, reviewing the literature and writing the hypotheses, preparing the proposal of the research, carrying out the research procedures, and writing the research report. The effect size ($\eta^2$) was high for all skills.

11. Recommendations
Based on the results of this study the researcher recommends the need to expand the use of the Project-Web Learning Approach in the teaching of all the courses of the master's students, because
it has a positive effect to improve the motivation of students towards learning, and develop their academic skills. It is also necessary to provide material and moral support and training appropriate for Master's Students to encourage them to conduct action researches in the field of specialization, in order to solve their practical problems by a scientific method. More research should be conducted to identify the effect of using Project-Web Learning Approach to develop other variables, and prepare a comparative study on the effect of using Project-Web Learning Approach and other Approaches on development action research in other educational stages other than the one examined in this study.

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The Impact of Texting on Standard English: The Students’ Perspective

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Abstract
Overindulgence in social networking, in general, and texting, in particular, is much in practice. It is cutting across various population boundaries and has almost assumed an endemic proportion. Its consequential impact on the standard language has acquired greater importance. This paper aims to determine the perceptions and attitudes of English Second Language (ESL) learners at Aligarh Muslim University towards the consequences of texting on Standard English. The data were collected through a five-point scale questionnaire from ninety students who were enrolled at Aligarh Muslim University during the academic year 2010-2011. The respondents completed a 16-item questionnaire. The students from which the data were collected were grouped according to their levels. The results indicate the negative impact of this new usage of the language in breaking the rules of English language and influencing their literacy. Moreover, the questionnaire results from respondents’ point of view show that regardless of their heavy use of texting, most respondents have a negative attitude towards texting and they viewed it as a threat to Standard English.

Keywords: attitudes, consequences, negative impact, Standard English, texting

1. Introduction

The prolific use of texting in modern life and its consequent pros and cons are assuming great importance in the contemporary world. This has also resulted in the divisions and disagreements among scholars as to its effect on the structure of language. The impact of texting on Standard English has been studied by a number of scholars. According to Drouin and Davis (2009), approximately half of their participants in the study reported that texting is making it challenging to remember Standard English and it could have a negative impact on their usage of Standard English. Texting is “a language that has swept our world like a tsunami, in less than a decade” (Swartzlander, 2010, p.vi). Texting has been perceived in different ways by different scholars. Some scholars have critiqued it on the grounds of distorting English spelling system in the name of simplification. They believe that simplification of spelling is being carried out with no consideration to history and pride associated with language. Other scholars believe that there is no problem with texting as long as one is able to communicate and understand each other through it. The advent of texting has created many variations of English language and allowed the users to break the rules of Standard English. Baron (2008) points out that we are flooding the scriptorium with an abundance of instant and text messages and, as a result, we are unable to distinguish the important from the unimportant or the great works from the so-called “vapour text”. Baron maintains “unless we learn to regulate our current language use, we will have difficulty understanding each other and the standardized forms of our written language will be lost.” (as cited in Maynard, 2009, p. 2).

The domain of this research will mainly focus on the impact of texting on Standard English from the students' points of view. The study was conducted at Aligarh Muslim University (AMU) in India, where essentially Urdu is the first language of the students while English is used as a medium of instruction and it is spoken as a second or a foreign language for most AMU students.

2. Research Questions

The present study aims to achieve some objectives that can be summarized in the following research questions:

1. What is the impact of texting on Standard English from students' point of view?
2. Are ESL students aware of the impact of texting?

3. Review of Literature

Janin-Starr (2014) states that some researchers found texting to interfere with formal writing, while other studies demonstrated just the opposite in schoolwork. Janin-Starr maintains that “the issues with texting can become complicated and confusion”. A similar predicament and anxiety have been expressed by Baron (2008) when she writes the preface of her book titled: Language in an Online and Mobile World. “In writing this book, I have felt comparable frustration in attempting to characterize a phenomenon in flux”(Baron, 2008, p. ix). Irish education officials reported that “Online commentary gives the impression that the court of public opinion sides with the view that texting has a poisonous influence on language and literacy” (Wolman, 2008, p.179). Prøysen (2009) argues that there seems to be some truth in the prophecy that texting English will erode children's ability to spell, punctuate and capitalize correctly, and that children will transfer these new habits into their schoolwork. Prøysen’s fieldwork in the United States supported her hypothesis that high school students do not keep the language of text messaging separate from Standard English written
texts, so that text messaging language is used in school work. Proysen’s general argument is that if one is struggling with the language learning process, and one has to learn a second language in addition to one's mother tongue, it may be difficult for the weak students to keep up and texting makes things worse. The corruption of language and the degradation in spelling by students have been noticed by many teachers across the world. Textism is blamed for this and many teachers have even formally voiced their complaints of textism creeping into formal “school resister language”. Teachers have found that texting has crept into formal writing such as papers, forms, tests, projects, and other forms (Ali, 2012; Vosloo, 2009; Kemp & Bushnell, 2011; Coe & Oakhill, 2011 and Leedham et al., 2009).

In exploring whether the incessant use of the language of email, SMS, chat and other electronic media damage the students’ ability to use the Standard language conventions expected in examinations, Ellis, Daniels, and Jauregui (2010) suggest that the frequent use of cell phone may have a negative effect on academic performance. Harman and Sato (2011) show a negative correlation between number of SMS text messages and academic scores. Wood, Kemp, Waldron, and Hart (2014) find that the text messages of children at both primary and secondary school were rife with grammatical violations.

Psychologists use the “decay theory” to explain this phenomenon. Decay theory states that learned information will be less accessible over time, especially when they are not being activated through use. According to this theory, if individuals are using texting as their main form of communication, Standard English may deteriorate from disuse (Drouin & Davis, 2009, p. 51). There is a concern that students who frequently express themselves in abbreviations and smiley faces may lose the capacity for more nuanced, grammatically correct writing. “A considerable number of educators and children’s advocates ... are concerned that the quality of writing by young Americans is being degraded by their electronic communication, with its carefree spelling, lax punctuation and grammar, and its acronym shortcuts” (Lenhart, Arafeh, Smith, and Macgill, 2008, p. i). Cingel and Sundar (2012) find a negative association between US children's performance and their use of textisms. Lee (2002) describes texting as an incessant assault of technology on formal written English. Ali et al. (2015) found out that texting creates lack of comprehension for English speakers, learners, and texters.

On the other side, Crystal (2008) believes that the widespread concern about the impact of texting on children’s literacy is unfounded. The brevity of the text style, and the 160 character constraint of an SMS, require the author to write economically, inventively and playfully. Tagliamonte and Denis (2008) suggest that new media language does not interfere with standard literacy. Many other linguistic studies on texting find that texting doesn't have a negative impact on language (Al-kadi , 2017; Ahmed & Al-kadi, 2016; Grinter & Eldridge, 2001, 2003; Faulkner & Culwin, 2004 and Doring, 2002).Farina and Lyddy (2011) argue that text messaging language is not as deviant as media portrays. Furthermore, the use of textisms is found to correlate positively with word reading, vocabulary and phonological awareness in children, and some aspects of language performance in young adults. Hamzah, Ghorbani and Abdullah (2009) find that the written language is being creatively adapted, developed, and enhanced to suit the conditions of the electronic communication age. Syntactical and lexical reductions are just strategies used to reduce effort, time and space. The authors believe texting is perfectly acceptable for use in text messages,
but school work, formal letters, business communication and examinations require standard language.

4. Methods

4.1. Subjects Selection
The sample of this research consisted of ninety AMU subjects from Aligarh Muslim University, India. They were grouped according to their levels of education: Plus Two, Bachelor, Master and PhD. Twenty subjects from Faculty of Commerce, 20 subjects from Faculty of Science and 20 subjects from Faculty of Arts. Faculty of Social Sciences and Faculty of Engineering and Technology did not have Plus Two level. Therefore, the subjects were 15 from Faculty of Social Sciences and 15 Faculty of Engineering and Technology. The authors selected Plus Two level which refers to a one year course between secondary school and bachelor degree. This group has been selected because they are somewhat younger.

4.2. Instrument
The instrument of this research was a questionnaire of 16 items. The alternative responses were fixed and close-ended. The responses of the close-ended questions are simple to administer and easy to analyze. The statements in the questionnaire of the study were the five-point scale and the responses were graded from ‘Strongly Agree’ to ‘Strongly Disagree'. The sequencing of the questions/statements was achieved by taking KAP (Knowledge, Attitude and Practice) as a formula for sequence. The questionnaire was refereed by experts of designing and experts of statistical analysis before its final distribution. The completed questionnaires were transferred to a text file and then analysed by to SPSS version 16.0 for analysis.

4.3. Procedure of Data Interpretation
After analysing the data and presenting the results in tables supported by graphs where necessary, the results of the data analyses were interpreted in details. In other words, the results found were presented in a written form. The consolidation and inferring were declared throughout the statistical analysis and results interpretation section. Then the findings were stated out in conclusion.

5. Statistical Analysis and Results Interpretation
In this section, the data were statistically analysed and interpreted. The respondents' responses to the questionnaire items were presented in tables.

1. The regular use of the language of email, SMS and chat damages the learners' ability to use the Standard English.

Table 1. The statistics of the responses on item No. 1.

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.8652</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.01344</td>
</tr>
</tbody>
</table>

Table 1 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “the regular use of the language of email, SMS and chat damages the learners’ ability to use Standard English”. The mean score of the responses was about 3.87 and the standard deviation was about 1.01, which showed that the responses were clustered around ‘agree’ option. Generally
speaking, according to the responses of the ninety respondents, texting had a negative influence on the learners’ ability to use Standard English. The level of agreement showed that texting had a negative influence on Standard English.

2. **The language of email, SMS and chat affects the goodness of the pure English language.**

   Table 2. *The statistics of the responses on item No. 2.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.6180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.20138</td>
</tr>
</tbody>
</table>

   Table 2 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “The language of email, SMS and chat definitely abuses the goodness of the pure English language”. The mean score of the responses was about 3.62 and the standard deviation was about 1.20. This showed that the responses were clustered around ‘neutral’ and ‘agree’ options. Generally speaking, according to the responses of the ninety respondents, texting had a negative influence on the goodness of Standard English. This showed that the respondents who agreed with the statement were more than the respondents who did not agree with the statement and this indicated that texting was not a good addition to Standard English.

3. **There are some people who know the language of email, SMS and chat better than the standard English.**

   Table 3. *The statistics of the responses on item No. 3.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.3977</th>
</tr>
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<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.04540</td>
</tr>
</tbody>
</table>

   Table 3 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “There are some learners who only know the language of email, SMS and chat”. The mean score of the responses was about 3.40 and the standard deviation was about 1.05. It showed that the responses were clustered around ‘neutral’ option. Generally speaking, the level of agreement showed that the respondents who agreed that there were some people who knew texting chat better than the standard English more than those who disagreed with this point.

4. **The appearance of the language of email, SMS and chat in writing exam's answers/assignments is an indication of a danger to English language.**

   Table 4. *The statistics of the responses on item No. 4.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.9195</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>.99087</td>
</tr>
</tbody>
</table>

   Table 4 shows the statistics of the responses of the ninety respondents surveyed regarding the above statement. The mean score of the responses was about 3.92 and the standard deviation was about .99, which showed that the responses were clustered around ‘agree’ option. Generally speaking, according to the responses of the ninety responses, the appearance of texting in school had a negative influence on English language.
5. Email, SMS and chat are destroying English language.

Table 5. The statistics of the responses on item No. 5.

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<tbody>
<tr>
<td>Mean</td>
<td>3.1910</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.22360</td>
</tr>
</tbody>
</table>

Table 5 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Email, SMS and chat are destroying English language”. The mean score of the responses was about 3.20 and the standard deviation was about 1.22. It showed that the responses were clustered around ‘neutral’ option. Generally speaking, according to the responses of the ninety respondents, texting destroyed English language.

6. Email helps me to improve English grammar.

Table 6. The statistics of the responses on item No. 6.

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<tbody>
<tr>
<td>Mean</td>
<td>3.5444</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.19137</td>
</tr>
</tbody>
</table>

Table 6 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Email helps me to improve English grammar”. The mean score of the responses was about 3.54 and the standard deviation was about 1.19. It showed that the responses were clustered around ‘disagree’ option. Generally speaking, according to the responses of the ninety respondents, the email language did not help in improving English grammar.

6. SMS helps me to improve English grammar.

Table 7. The statistics of the responses on item No. 7.

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<tbody>
<tr>
<td>Mean</td>
<td>3.6591</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.11300</td>
</tr>
</tbody>
</table>

Table 7 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “SMS helps me to improve English grammar”. The mean score of the responses was about 3.66 and the standard deviation was about 1.11. It showed that the responses were clustered around ‘disagree’ option. Generally speaking, according to the respondents of the ninety responses, SMS did not help in improving English grammar.

8. Chat helps me to improve English grammar.

Table 8. The statistics of the responses on item No. 8.

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<tr>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.4831</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.15908</td>
</tr>
</tbody>
</table>

Table 8 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Chat helps me to improve English grammar”. The mean score of the responses was about 3.48 and the standard deviation was about 1.16, which showed that the responses were
clustered around ‘neutral’ and ‘disagree’ options. Generally speaking, the level of disagreement showed that chat did not help students in improving English grammar.

9. **Email helps me to acquire the right vocabularies.**

Table 9. *The statistics of the responses on item No. 9.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.1149</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.08290</td>
</tr>
</tbody>
</table>

Table 9 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Email helps me to acquire the right vocabularies”. The mean score of the responses was about 3.11 and the standard deviation was about 1.08. It showed that the responses were clustered around ‘neutral’ option. Generally speaking, the level of disagreement showed that email did not help students acquire the right vocabularies.

10. **SMS helps me to acquire the right vocabularies.**

Table 10. *The statistics of the responses on item No. 10.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.2386</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.06128</td>
</tr>
</tbody>
</table>

Table 10 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “SMS helps me to acquire the right vocabularies”. The mean score of the responses was about 3.24 and the standard deviation was about 1.06, which showed that the responses were clustered around ‘neutral’ option. Generally speaking, according to most of the respondents' responses, SMS did not help the students to acquire the right vocabularies.

11. **Chat helps me to acquire the right vocabularies.**

Table 11. *The statistics of the responses on item No. 11.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.2593</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.13774</td>
</tr>
</tbody>
</table>

Table 11 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Chat helps me to acquire the right vocabularies”. The mean score of the responses was about 3.26 and the standard deviation was about 1.14, which showed that the responses were clustered around ‘neutral’ option. Generally speaking, the level of disagreement with the statement showed that chat did not help the students acquire the right vocabularies.

12. **When I email, SMS or chat, I do not care about grammar.**

Table 12. *The statistics of the responses on item No. 12.*

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.5568</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.14328</td>
</tr>
</tbody>
</table>

clumped around ‘neutral’ and ‘disagree’ options. Generally speaking, the level of disagreement showed that chat did not help students in improving English grammar.
Table 12 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “When I email, SMS or chat, I do not care about grammar”. The mean score of the responses was about 3.56 and the standard deviation was about 1.14. It showed that the responses were clustered around ‘agree’ and ‘neutral’ options. Generally speaking, according to the respondents of the ninety responses, texting had a negative influence on the grammar of Standard English.

13. Sometimes I do not pay attention to choose the standard words when I email, SMS or chat.

Table 13. The statistics of the responses on item No. 13.

<table>
<thead>
<tr>
<th>Mean</th>
<th>3.6250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.02062</td>
</tr>
</tbody>
</table>

Table 13 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Sometimes I do not pay attention to choose the standard words when I email, SMS or chat”. The mean score of the responses was about 3.63 and the standard deviation was about 1.02. It showed that the responses were clustered around ‘agree’ option. Generally speaking, according to the respondents to the statement, Standard English was not important for texters while texting.

14. Sometimes I use the language of email, SMS and chat to hide my grammatical and spelling errors.

Table 14. The statistics of the responses on item No. 14.

<table>
<thead>
<tr>
<th>Mean</th>
<th>2.9667</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.22199</td>
</tr>
</tbody>
</table>

Table 14 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “Sometimes I use the language of email, SMS and chat to hide my grammatical and spelling errors”. The mean score of the responses was about 2.97 and the standard deviation was about 1.22, which showed that the responses were clustered around ‘neutral’ option. Generally speaking, according to the responses, texting was sometimes used to hide the errors of texters, and this showed that texting was taken as a shelter for those who do not know Standard English.

15. Sometimes I use the language of email, SMS and chat in writing exam's answers/assignments/papers.

Table 15. The statistics of the responses on item No. 15.

<table>
<thead>
<tr>
<th>Mean</th>
<th>2.4831</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Deviation</td>
<td>1.36609</td>
</tr>
</tbody>
</table>

Table 15 shows the statistics of the responses of the ninety respondents surveyed regarding the statement "Sometimes I use the language of email, SMS and chat in writing exam's answers/assignments/papers". The mean score of the responses was about 2.48 and the standard deviation was 1.37.
deviation was about 1.37 which showed that the responses were clustered around ‘disagree' and ‘neutral' options. Generally speaking, this showed that texting started to be used in academics and if this happens, it is a real problem as Crystal (2008) believes.

16. When I contact others through email, SMS and chat, I use code mixing (e.g. My Purana number wz this).

Table 16. The statistics of the responses on item No. 16.

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<tbody>
<tr>
<td>Mean</td>
<td>3.4157</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.22297</td>
</tr>
</tbody>
</table>

Table 16 shows the statistics of the responses of the ninety respondents surveyed regarding the statement “When I contact others through email, SMS and chat, I use code mixing (e.g. My purana number wz this; translated as “My old number was this”). The mean score of the responses was about 3.42 and the standard deviation was about 1.22. It showed that the responses were clustered around ‘agree' and ‘neutral’ options. Generally speaking, the level of agreement showed that most of the respondents use code mixing when they contacted through texting.

6. Conclusions and suggestions

After a thorough analysis of the data, it was found that the respondents had a negative attitude towards texting and they viewed it as causing a negative impact on the structure of Standard English. Lenhart, Arafeh, Smith, and Macgill (2008, p. i) state that a number of educators and children’s advocates are “concerned that the quality of writing by young Americans is being degraded by their electronic communication”. Janin-Starr (2014, p. 45) states that “As dropping consonants and vowels and poor punctuation become a habit, this may destroy one’s reading and writing skills.” Regarding the difference between the level groups in their knowledge and opinion about texting, there was no significant difference between the level groups. A significant difference between the level groups was only seen in their responses on the statement “Email, SMS and chat are destroying English language”. It was found that no respondent of Plus Two level disagreed with the statement “Email, SMS and chat are destroying English language. This shows that even the young respondents believe that texting destroys English language.

Further studies should be conducted on meta-data analysis of the researches that have earlier been carried out on texting. This proposed meta-data analysis, including qualitative and quantitative studies on texting, will provide useful insights and recommendations. These, in turn, will present a clearer picture of the effects of texting on Standard English.

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Arab World English Journal
www.awej.org
ISSN: 2229-9327
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References


The Determinants of Use and Acceptance of Mobile Assisted Language Learning: The Case of EFL Students in Morocco

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Abstract
The intent of this paper is to research the factors that determine students’ acceptance of mobile assisted language learning (MALL) in Morocco. This study emphasizes the inclusive character of the Unified Theory of Acceptance and Use of Technology (UTAUT). After careful assessment of the multiple relationships within UTAUT, a modified version of the theory was hypothesized then researched for the impact it has on the English as Foreign Language (EFL) context in Morocco. The technology acceptance model in this paper emphasized four directions connecting performance expectancy, effort expectancy, teacher feedback and compatibility to behavioral intention, also referred to as the determinants of behavioral intention to use MALL. For the purpose of this study, a technology enhanced environment was created. A total number of 156 EFL common core students were brought to interact on a WhatsApp-based platform by means of text-messaging. The WhatsApp treatment was optimized to synchronize with the institutionalized character of the teaching of English in Moroccan public schools. The questionnaire method was used for data collection. The data were screened for missingness, normality and outliers. Then, multiple reliability and validity tests were performed to substantiate the legitimacy of the dataset. Structural equation modelling (SEM) was used in the assessment of the measurement model and the structural model. The outputs of structural modelling corroborated the hypothesized directions connecting teacher feedback and compatibility to behavioral intention to use MALL while there was lack of support for the relationships linking performance expectancy and effort expectancy to behavioral intention to use MALL.

Key words: educational technology, English as a foreign language, mobile language learning, Morocco, technology acceptance

Introduction
The telecommunication market in Morocco is in constant maturation as an increasing number of Moroccans continue to use and adapt to the emerging technology-empowered means of communication. This orientation towards digital mobile data marks the evolution of a society that is conscious of the legitimacy of digital input. Mobile technology is a promising field of interest that is also replete with many uncertainties, among which is the challenge for sustainability. The offerings of mobile technology need be optimized to synchronize with the fundamentals of education.

The educational discourse in Morocco does not prioritize an institutionalized incorporation of educational technology. The implementation of MALL is still obstructed by the scarcity of operational frameworks susceptible to standardize and institutionalize the use of mobile technology for educational purposes. Any prospective implementation of mobile technology in the Moroccan educational context is entitled to belong dependently of valid theoretical framework.

The primary objective of this paper is to investigate the determinants of MALL. This study extends the theoretical frameworks of UTAUT to suit the fundamentals of the language learning discourse in Morocco. In particular, a customized UTAUT model was used in researching acceptance of MALL among EFL students. Data were collected from 156 EFL common core students who were subjected to a WhatsApp-based treatment. The data were screened for missingness, normality and outlier and checked for reliability and validity. SEM was used in the assessment of the measurement theory and the structural theory.

The UTAUT model
The UTAUT model is a synthesis of eight theories of technology use and acceptance: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model (MM), the Theory of Planned Behavior (TPB), a combined (TBP) and (TAM), the Model of PC Utilization (MPCU), the Innovation Diffusion Theory (IDT), and the Social Cognitive Theory (SCT) (Ventakesh et al., 2003). Indeed, UTAUT offers a theoretically-enhanced research framework in the light of which the determinants of technology use and acceptance are researched in varied contexts.

Figure 1. The UTAUT model (Ventakesh et al. 2003, p. 447)
As shown in figure 2, UTAUT is configured to provide for the influence of performance expectancy, effort expectancy, social influence and facilitating conditions on Behavioural intention and use behaviour. Also these connections are moderated by gender, age, experience and voluntariness of use. The fundamental structures of UTAUT are empirically validated and statistically significant.

Most importantly, UTAUT does not only synthesise the research on technology use and acceptance, but it also forwards a creative framework susceptible to identify new patterns of behaviour in different contexts. Many studies used extended versions of UTAUT in researching students’ acceptance of mobile learning. Abu-Al-Aish and Love (2013) modify the initial structures of UTAUT for the purpose of researching the determinants of mobile learning among higher education students. Quality and service together with personal innovativeness are used instead of facilitating conditions. The two constructs are found statistically significant and capable of predicting acceptance of mobile technology. Also in many studies, the UTAUT relationships are not found significant (Barnes & Vidgen, 2009; Cornacchia, Papa, Livi, Nicolo & Bruno, 2008; Jayasingh & EZE, 2009; Pai & Tu, 2011).

Research model
The fundamental structures of UTAUT are not a pure product as they bear the mark and identity of prior research models. Extensibility happens to be a key feature of UTAUT in view of the theory’s reliance on a varied range of research orientations in the field of technology use and acceptance. In this vein, Ventakech et al. (2003, p. 471) makes it clear that “future research should focus on identifying constructs that can add to the prediction of intention and behaviour over and above what is already known and understood”, and so is the intent of this paper. For the purpose of this study, the internal structures of the UTAUT model are reconfigured and extended to suit the realities of the educational discourse in Morocco. In particular, a customised version of UTAUT is used to research the determinants of language learners’ acceptance of Mobile Assisted Language Learning.

![Figure 2](image-url)

**Figure 2.** The adopted research model (based on UTAUT by Ventakesh et al., 2003)

As shown in figure 2, the initial structures of UTAUT are modified to synchronize with the intent of this study. Four constructs are researched for the influence they exert on EFL students’ behavioral intention to use MALL. In addition to effort expectancy and performance expectancy, two constructs are inserted into original UTAUT: compatibility and teacher’s feedback. In this
The research model, the core determinants of behavioral intention to use MALL are presented as the following:

Performance expectancy is a core determinant of behavioral intention in UTAUT and it is presented as “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Fishbein & Ajzen, 1975, p. 447). The performance expectancy construct is theoretically enhanced as it combines the theoretical load of five constructs belonging to prior models and theories of technology use and acceptance, the perceived usefulness construct from TAM, the extrinsic motivation construct from HMIEM, the job fit construct from MPCU, the relative advantage construct from IDT, and the outcome expectations construct from SCT. In this research model, performance expectancy relates to the beliefs learners hold about the susceptibility of mobile learning to boost their performances in language learning contexts.

Effort expectancy is another determinant of intentional and use behavior of technology in the UTAUT model (Ventakesh et al., 2003). The effort expectancy construct arises from the theoretical frameworks of three traditions in the field of technology use and acceptance, the perceived ease of use construct from TAM, the complexity construct from MPCU, and the ease of use construct from IDT. In this modified version of UTAUT, effort expectancy denotes the levels of ease associated with the mobile-based trend in language learning. The accent is placed on learners’ estimations of mobile learning as a less difficult means of learning English.

Teacher feedback is made a core determinant of behavioural intention to use MALL. The teacher feedback construct synchronises with the realities of the educational discourse in general and the language learning context in particular. The legitimacy of teacher feedback as a determining factor in the language learning process could be observed from the lens of a number of studies which are centred on language learners’ responses to teachers’ feedback (Lee, 2008; Quinton & Smallbone, 2010). Most importantly, the teacher feedback construct is not entirely new to the initial structures of UTAUT as it bears resemblances with the source codes within the social influence construct in UTAUT, which is another hybrid determinant in UTAUT in view of its reciprocity with three constructs from prior models and theories of technology use and acceptance, in particular, the subjective norm construct from TRA, the social factors construct from MPCU, and the image construct from IDT. The social influence construct in UTAUT is referred to as the “degree to which an individual perceives that important others believe he or she should use the new system” (Ventakesh et al., 2003, p. 451). Teacher feedback in this research model ensures compatibility with the social influence construct in UTAUT; still, it concentrates attention on the influence teachers’ feedback has on learners’ inclinations to use MALL.

Compatibility is the fourth determinant of behavioural intention to use MALL in this research model. Compatibility is traced back to the theoretical backgrounds of it is presented as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 1983, p. 223). The compatibility feature in a newly introduced technology is understood to lower the uncertainties that may obstruct prospective implementation. In this research model, the” compatibility” construct relates to the extent to which the MALL experience synchronizes with learners’ needs and styles of learning.
Hypotheses
The current research model is conceived to emphasize the inclusive character of UTAUT. After critical review of the multiple relationships within the UTAUT model, a series of hypotheses are formulated to research the patterns of behavioral intention that are true to the mobile-based trend in language learning.
H1: Performance expectancy positively impacts behavioral intention to use MALL.
H2: Teacher’s feedback positively impacts behavioral intention to use MALL.
H3: Teacher’s feedback positively impacts behavioral intention to use MALL.
H4: Compatibility positively impacts use behavior of MALL.

Population and sampling
The intended population for this research matches the total number of EFL common core students in Morocco. Given the impracticality of research where the entire cases within a population are studied, the researcher must generate a sample that is representative of the target population (Neuman, 2014). The logic of convenience sampling synchronizes with the context of this research. The participants in this research correspond to the total number of 156 students who were previously grouped into four intact common core students. The characteristics of the research sample are shown in the figure 3.

![Sample population distribution by gender](image)

Figure 3. Sample population distribution by gender

The aggregate value of the participants as a collective group is more convenient to this study than the distinct characteristics of students if they are observed separately. This study is carried out with four groups of EFL common core science students who were previously set into four classes. The principles by which students are grouped into classes are statistically considerate of the ratios of age and gender together with the number of students in each class. The students in each class belong as a social group in which each member has equal chances to impact and benefit their community members.

Research site
This research project was carried out with the total number of 156 EFL students belonging to four common core science classes in AlQuds High School in Kenitra, Morocco from September 28th, 2017 to January 04th, 2018. The research site of this study affords high levels of reciprocity with the educational landscape in Morocco. It adequately reflects the realities of public schooling in Morocco. The Moroccan Ministry of National Education ensures uniform standards for public school infrastructure. The government commits to provide the fundamentals of institutionalised...
education in terms of security, hygiene, water and electricity supply together with operational classrooms for instruction. The margins for innovation are very limited. This is basically due to the administrative hierarchy by way of which all schools in the public sector must harmonise and standardise their infrastructure together with the quality of their education services. Also, the uniform character of institutionalised education in Morocco applies on the same level in both urban and rural areas. For this same reason, public schools in Morocco happen to attract a student population of the same socioeconomic status, basically those who cannot afford the costs of private schools.

**Data collection method**

The questionnaire method was used for data collection. The intent of this study is to research the factors that influence EFL students’ behavioural intention to use MALL. The questionnaire method was needed for the collection of quantitative data that measure the relationships between the constructs under investigation. It should be noted that the questionnaire in this research originated from the fundamental structures of the UTAUT model by Ventakesh et al. (2003) with a few modifications that provided for the inclusion of teacher feedback and compatibility as determinants of behavioural intention to use MALL. In particular, a structured questionnaire with a five-level Likert-scale type was used to enable the statistical analysis of the obtained data. The respondents’ knowledge of the English language was thought to be a problem for the full understanding of the contents on the questionnaire. Accordingly, the researcher translated the questionnaire into Arabic.

**The WhatsApp treatment**

The WhatsApp based treatment in this study was carried out during the first semester of the 2017-2018 school year with a total number of 156 students belonging to four common core science classes, of which 98 are females and 58 are males. Prior to the intervention, all the students were briefed on the intended use of WhatsApp for learning English together with the underlying objectives of the experimentation, which were in harmony with the 2005 Pedagogical Guidelines. The teacher made sure all students could afford to send and receive WhatsApp messages from a portable device. Then, students were given instructions on how to use the WhatsApp platform to submit and receive feedback about their homework assignments. It should be noted that the WhatsApp-based homework did not exclude traditional pen-and-paper homework. The EFL time for common core science students includes three hours per week. The teacher and students met three times a week for three classes of one hour. In the first two classes, students received paper-and-pen homework. It was in the third class which was also the last class of the week that students obtained the WhatsApp-based home assignment. The WhatsApp treatment was set for the closing class of each week to give students sufficient time for the completion of their tasks, knowing that a few students did not have permanent access to mobile devices with Internet connection as they had to be home to honour their duties. Teacher’s feedback was achieved in two ways. The teacher shared on the WhatsApp group personalised statements by way of recognition for all the contributors’ efforts regardless of the quality of their outputs. The second form of feedback was in class; also, it was content oriented. The teacher noted on the board distinct examples of students’ contributions to the WhatsApp group and called for whole-class appreciations of the displayed assignments. In so doing, students would monitor their own improvement in the light of the targeted standards.
Data screening
Prior to data analysis, data screening was carried out to inspect the data for potential inaccuracies, susceptible to interfere with the data analysis procedures. In particular, the data were screened for missingness, normality and outliers.

Missing data
Missing data constitute a sensitive issue when dealing with numeric data (Schlomer & Bauman, 2015). The respondents fail to complete a questionnaire or any instrument for data collection for a number of reasons, ranging from lack of motivation to inherent mediocrity in the instrument of data collection. Given the impossibility to ensure total reciprocity between value variables and their response items, researchers are confronted with the need to reproduce the validity of their dataset. Neuman (2014) identifies three types of missing data: missing completely at random (MCAR), missing at random (MAR) and not missing at random. MCAR remains the least consequential type of missing data. In the case of MCAR, the odds for nonresponse belong independently of any other variables in the data set. Cases presented with missing data can be discarded without causing any statistical bias. In MAR, a case of non-response is automated by other discernible variables in the dataset. For example, in true-experimental design all the participants belonging to the treatment group fail to provide a response for a distinct value variable in relation to the treatment. This case of non-response is conditioned by external variables. NMAR is the most consequential form of missing data. For example, in a questionnaire survey, the respondents fail to provide an answer for a value variable on personality traits because they are too introvert to do it. In this case, missingness is the function of the value variable. Given the impossibility to control the probability for non-response, researchers are bound to choose among a number of missing data methods to restore validity to the statistical analyses in their study (Neuman, 2014). Basically, two approaches are adopted in dealing with missing data: deletion Vs Imputation. Deletion methods simply omit the data with missing value variables while imputation methods depend on statistical protocols to substitute the missing data.

In this study, of 156 questionnaires, 155 were duly completed while one questionnaire was presented with a no-response item for the gender variable. This pattern of missing data was diagnosed as a MCAR because it belonged independently of the other variables in the questionnaire. Also, it was easy to supply the response for the missing variable with maximum likelihood. The questionnaire with missing data was collected from common core science 4, in which there were 24 females and 16 males. After computing the number of questionnaires for that group, 24 questionnaires were found with a female designation for the gender variable while only 15 Questionnaires were presented with a “male” response. Eventually, it was concluded that the missing response item for the value variable on gender corresponded to “male”.

Normality
Normality is the process by which the distribution of data is checked for the purpose of corroborating the validity of dataset (Ghasemi & Zahediasl, 2012). Any assumption about the normal distribution of data needs to convert into finite statistical analyses. The current study deployed a numeric method for assessing normality. The values of kurtosis and skewness were computed. Skewness interrogates the horizontal proportion of data while kurtosis is a vertical estimation of data. The normality test in this research was carried out by dividing the values of
skewness and kurtosis by their respective standard errors for the purpose of obtaining a z-score for both Kurtosis and skewness. In this vein, Kim (2013) specifies that the z-scores for skewness and kurtosis are fixed at minus or plus 3.29 in sample sizes of 50 to 300.

Table 1. Results for the statistical estimation of skewness and kurtosis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Skewness</th>
<th>Std. Error of Skewness</th>
<th>Skewness z-value</th>
<th>Kurtosis</th>
<th>Std. Error of Kurtosis</th>
<th>Kurtosis z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE1</td>
<td>4.48</td>
<td>-.500</td>
<td>.194</td>
<td>-2.577</td>
<td>.299</td>
<td>.386</td>
<td>0.774</td>
</tr>
<tr>
<td>PE2</td>
<td>3.83</td>
<td>-.635</td>
<td>.194</td>
<td>-3.273</td>
<td>.454</td>
<td>.386</td>
<td>1.176</td>
</tr>
<tr>
<td>PE3</td>
<td>4.06</td>
<td>-.622</td>
<td>.194</td>
<td>-3.206</td>
<td>.297</td>
<td>.386</td>
<td>0.772</td>
</tr>
<tr>
<td>PE4</td>
<td>3.96</td>
<td>-.362</td>
<td>.194</td>
<td>-1.865</td>
<td>-.463</td>
<td>.386</td>
<td>-1.199</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE1</td>
<td>4.43</td>
<td>-.533</td>
<td>.194</td>
<td>-2.747</td>
<td>-.610</td>
<td>.386</td>
<td>1.580</td>
</tr>
<tr>
<td>EE2</td>
<td>4.29</td>
<td>-.416</td>
<td>.194</td>
<td>-2.144</td>
<td>-.782</td>
<td>.386</td>
<td>-2.025</td>
</tr>
<tr>
<td>EE3</td>
<td>4.38</td>
<td>-.629</td>
<td>.194</td>
<td>-3.242</td>
<td>-.673</td>
<td>.386</td>
<td>-1.743</td>
</tr>
<tr>
<td>EE4</td>
<td>4.37</td>
<td>-.587</td>
<td>.194</td>
<td>-3.02</td>
<td>-.670</td>
<td>.386</td>
<td>-1.735</td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TF1</td>
<td>4.37</td>
<td>-.591</td>
<td>.194</td>
<td>-3.046</td>
<td>-.695</td>
<td>.386</td>
<td>-1.800</td>
</tr>
<tr>
<td>TF2</td>
<td>4.35</td>
<td>-.553</td>
<td>.194</td>
<td>-2.850</td>
<td>-.712</td>
<td>.386</td>
<td>-1.844</td>
</tr>
<tr>
<td>Compatibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>4.16</td>
<td>-.630</td>
<td>.194</td>
<td>-3.247</td>
<td>-.010</td>
<td>.386</td>
<td>0.025</td>
</tr>
<tr>
<td>C2</td>
<td>4.11</td>
<td>-.623</td>
<td>.194</td>
<td>-3.211</td>
<td>.145</td>
<td>.386</td>
<td>0.375</td>
</tr>
<tr>
<td>C3</td>
<td>4.06</td>
<td>-.591</td>
<td>.194</td>
<td>-3.046</td>
<td>-.206</td>
<td>.386</td>
<td>0.533</td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI1</td>
<td>4.32</td>
<td>-.552</td>
<td>.194</td>
<td>-2.690</td>
<td>-.862</td>
<td>.386</td>
<td>-2.233</td>
</tr>
<tr>
<td>BI2</td>
<td>4.33</td>
<td>-.569</td>
<td>.194</td>
<td>-2.932</td>
<td>-.856</td>
<td>.386</td>
<td>-2.217</td>
</tr>
<tr>
<td>BI3</td>
<td>4.30</td>
<td>-.557</td>
<td>.194</td>
<td>-2.871</td>
<td>-1.018</td>
<td>.386</td>
<td>-2.637</td>
</tr>
</tbody>
</table>

With the acceptable range of skewness and kurtosis being fixed at minus or plus 3.29, all the indicator values were within the acceptable degrees of freedom. Eventually, there was empirical evidence of the normal distribution of data.

Outliers
Outliers interfere with the overall accuracy of data. They appear in the form of anomalous observation points in the distribution of data (Hawkins, 1980). Outliers are suggestive of extreme response patterns in the dataset and they convert into erroneous statistical analyses. In particular, outliers subdivide into: univariate outliers and multivariate outliers. Univariate outliers cause disconformities in a single variable while multivariate outliers operate on different structures to cause instances of deviation that negatively affect the dataset. In this study, Tukey’s method, also referred to as the boxplot method, was used for the detection of univariate outliers (Tukey, 1977;
Rocke & Woodruff, 1996; Hoagling & Iglewicz, 1987). The following steps were followed throughout the application of Tukey’s method:

- Step 1: Using IBM Statistics SPSS version 25, the researcher subjected the independent variables to descriptive statistics for the purpose of displaying the percentiles in the data.
- Step 2: The researcher identified the lower quartile (Q1) which corresponded to the 25th percentile together with the upper quartile (Q3) which corresponded to the 75th percentile.
- Step 3: the difference between the upper quartile and the lower quartile was calculated and multiplied by the $k$ factor that equals 2.2 (Hoagling & Iglewicz, 1987).
- Step 4: The sum from the above formula was added to the upper and lower quartiles for the purpose of obtaining the acceptable limits for extreme values at both ends of the data distribution.
- Step 5: All variables with extreme values that exceeded the obtained interval limits were labelled as univariate outliers.

Table 2 provides an overview of the statistical analysis used for detecting univariate outliers by which the absence of univariate outliers was corroborated.

Table 2. Assessment of univariate outliers

<table>
<thead>
<tr>
<th>Variable</th>
<th>Q1</th>
<th>Q3</th>
<th>K-distance</th>
<th>Minimum limit</th>
<th>Maximum limit</th>
<th>Outlier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Expectancy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE1</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>PE2</td>
<td>3</td>
<td>4</td>
<td>2.2</td>
<td>0.8</td>
<td>6.2</td>
<td>0</td>
</tr>
<tr>
<td>PE3</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>PE4</td>
<td>3</td>
<td>5</td>
<td>4.2</td>
<td>0.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Effort Expectancy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE1</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>EE2</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>EE3</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>EE4</td>
<td>4</td>
<td>5</td>
<td>4.2</td>
<td>0.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Teacher Feedback</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TF1</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>TF2</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Compatibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>C2</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>C3</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Behavioural Intention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B11</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>B12</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>B13</td>
<td>4</td>
<td>5</td>
<td>2.2</td>
<td>1.8</td>
<td>7.2</td>
<td>0</td>
</tr>
</tbody>
</table>

The Mahalanobis distance was computed for detecting multivariate outliers (Tabarchnick & Fidell, 2001; Filzmoser, 2004). The Mahalanobis method deploys statistical analyses to identify...
anomalous observation points throughout the research data. In particular, the method calculates
the statistical distance separating the data points for the purpose of identifying extreme values that
are visually detached from the centre of the data. In this study, with the help of IBM Statistics
SPSS version 25, the Mahalanobis distance for all the independent variables was computed using
linear regression estimates. Then, the value variables for the Mahalanobis distance were inspected
for the Chi Square distribution. Specifically, the values obtained for the Mahalanobis distance were
divided by the number of the research variables, also referred to as degrees of freedom. All cases
with values less than 0.01 had to be labelled as multivariate outliers. The outputs of the statistical
analyses of the Mahalanobis distance demonstrated the absence of multivariate outliers. The
frequencies for the Mahalanobis distance are presented in table 2.

Table 3. Frequencies of the Mahalanobis distance for the study variables.

<table>
<thead>
<tr>
<th>Mahalanobis Distance</th>
<th>MD_Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Anomalies</td>
<td>156</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>14,9038462</td>
</tr>
<tr>
<td>Median</td>
<td>14,1619421</td>
</tr>
<tr>
<td>Mode</td>
<td>3,15286\textsuperscript{a}</td>
</tr>
<tr>
<td>Minimum</td>
<td>3,15286</td>
</tr>
<tr>
<td>Maximum</td>
<td>38,56292</td>
</tr>
<tr>
<td>Sum</td>
<td>2325,00000</td>
</tr>
</tbody>
</table>

Reliability
Reliability is an important dimension from where to substantiate the legitimacy of scale
measurement. Sekaran (2003) posits that “the reliability of a measure indicates the extent to which
it is without bias (error free) and hence ensures consistent measurement across time and across the
various items in the instrument” (p.203). Reliability informs on the quality of the instrument and
its ability to generate satisfactory results.

In this study, Cronbach’s coefficient alpha and item-total correlation were used as
measures of reliability. The alpha coefficient is a legitimate index of reliability for scales with
multiple items and so is the scale measurement in this study (Zikmund, Babin, Carr & Griffin,
2013). On a scale of zero to one, where one means inexistential inter-item consistency and one means
absolute inter-item consistency, the acceptable score for an alpha value is 0.7 (Nunnally, 1978).
Item-total correlation is another statistical analysis by which the aggregate value of a scale is
computed for its correlation with individual items (Hair et al., 2006). By investigating the levels
of correlation in each construct, we get to know the level homogeneity in the measurement scales.
In this regard, scores for item-total correlation that are above 0.3 are suggestive of good inter-item
consistency (Cristobal et al., 2007). The values obtained for Cronbach’s coefficient alpha and item-
total correlation are displayed in table 3.
In parallel with Cronbach’s coefficient alpha, item-total correlation was computed to investigate the consistency of the measures.

Table 4. Results for Cronbach’s coefficient alpha and item-total correlation

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
<th>Item-total correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance expectancy</td>
<td>4</td>
<td>0.705</td>
<td>PE1 0.320 PE2 0.549 PE3 0.588 PE4 0.526</td>
</tr>
<tr>
<td>Effort expectancy</td>
<td>4</td>
<td>0.730</td>
<td>EE1 0.376 EE2 0.490 EE3 0.675 EE4 0.554</td>
</tr>
<tr>
<td>Teacher feedback</td>
<td>2</td>
<td>0.923</td>
<td>TF1 0.857 TF2</td>
</tr>
<tr>
<td>Compatibility</td>
<td>3</td>
<td>0.910</td>
<td>C1 0.702 C2 0.909 C3 0.864</td>
</tr>
<tr>
<td>Behavioural intention</td>
<td>3</td>
<td>0.844</td>
<td>BI1 0.676 BI2 0.778 BI3 0.678</td>
</tr>
</tbody>
</table>

As shown above, all the alphas were up to a level that is clearly above 0.7. Also, there was evidence of inter-item consistency. The two reliability tests substantiated the consistency of the measures.

**Validity**

In the context of measurement, validity lends itself to different paths of logic. In this study, both content validity and construct validity were considered to assess the accuracy of the measures (Zikmund et al., 2013).

**Content validity**

Content validity designates the levels of reciprocity between a measure and the construct under investigation (Sekaran, 2003). The obligation of a measure to contain the theoretical load of a single concept is vital to the overall validity of the measurement device. The measurement device in this study was based on the questionnaire developed by Ventakesh et al. (2003). The constructs being investigated together with their operational definitions and scales were developed from previously tested research models. Also, the validity of the questionnaire was further checked by means of a focus group method. Together with the researcher, a panel of three doctoral candidates took part in the assessment of the measurement device. The purpose of the focus group method was to identify inaccuracies in the questionnaire, among which the lack of agreement between the scale items and the target items. In a later stage, the content validity of the questionnaire was checked by means of a pilot study. In particular, the Arabic version of the questionnaire was personally administered to a group of thirty-one secondary baccalaureate students in order to assess the clarity of the measurement items. The outputs of the focus group and the pilot study brought minor changes to the Arabic translation of the questionnaire.

**Construct validity**

Construct validity informs about the levels of agreement between the outputs of a measurement tool and the theoretical framework on which the measurement tool is set (Sekaran, 2003). In this study, factor analysis (FA) was carried out in the assessment of the validity of measurement. FA
is a multivariate technique that specifies the relationships among variables (Hair et al., 2006). In
particular, FA analysis lends itself to two statistical paths of analysis. One is exploratory while the
other is confirmatory. In this study, the assessment of construct validity is carried out by both
exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

**Exploratory factor analysis**
Exploratory factor analysis (EFA) specifies the relationships among variables without referring
to previously established structures or theories (Loewen & Gonulal, 2015). With the help of IBM
Statistics SPSS version 25, all the measurement scales in this research model were subjected to
principal component analysis with direct oblique rotation for the purpose of computing the
correlation matrix together with KMO and Bartlett’s test for the scales under investigation.

<table>
<thead>
<tr>
<th>Measurement scales</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Expectancy</strong></td>
<td></td>
</tr>
<tr>
<td>PE1</td>
<td>PE2</td>
</tr>
<tr>
<td>PE1 1,000</td>
<td></td>
</tr>
<tr>
<td>PE2 0,239</td>
<td>1,000</td>
</tr>
<tr>
<td>PE3 0,323</td>
<td>0,494</td>
</tr>
<tr>
<td>PE4 0,223</td>
<td>0,467</td>
</tr>
<tr>
<td><strong>Effort Expectancy</strong></td>
<td></td>
</tr>
<tr>
<td>EE1 1,000</td>
<td></td>
</tr>
<tr>
<td>EE2 0,329</td>
<td>1,000</td>
</tr>
<tr>
<td>EE3 0,328</td>
<td>0,483</td>
</tr>
<tr>
<td>EE4 0,259</td>
<td>0,336</td>
</tr>
<tr>
<td><strong>Teacher feedback</strong></td>
<td></td>
</tr>
<tr>
<td>TF1 1,000</td>
<td></td>
</tr>
<tr>
<td>TF2 0,857</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Compatibility</strong></td>
<td></td>
</tr>
<tr>
<td>C1 1,000</td>
<td></td>
</tr>
<tr>
<td>C2 0,717</td>
<td>1,000</td>
</tr>
<tr>
<td>C3 0,666</td>
<td>0,934</td>
</tr>
<tr>
<td><strong>Behavioural Intention</strong></td>
<td></td>
</tr>
<tr>
<td>BI1 1,000</td>
<td></td>
</tr>
<tr>
<td>BI2 0,687</td>
<td>1,000</td>
</tr>
<tr>
<td>BI3 0,558</td>
<td>0,687</td>
</tr>
</tbody>
</table>

In general terms, a negative coefficient value gives evidence of collinearity while a
coefficient value that is above 1 is suggestive of multicollinearity. In the case of collinearity, the
items are rejected because they are unrelated to one another and they cannot measure the same
construct. Also, multicollinearity reports excessive correlation between one or more items in a
measurement scale. Measurement items that are identical cannot be retained because they happen
to measure the same thing the correlation matrix for the measurement scales produced satisfactory
results. There was no evidence of collinearity or multicollinearity in the dataset. All the correlation
coefficients were positive and below 1,000. The measurement scales used in this study accounted for statistically valid degrees of correlation.

Table 6. *KMO and Bartlett's Test for the study constructs*

<table>
<thead>
<tr>
<th>Measurement scales</th>
<th>KMO and Bartlett's Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
</tr>
<tr>
<td>Performance Expectancy</td>
<td>.726</td>
</tr>
<tr>
<td></td>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td></td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>114,619</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Sig. .000</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>.671</td>
</tr>
<tr>
<td></td>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td></td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>153,473</td>
</tr>
<tr>
<td></td>
<td>Df</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Sig. .000</td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td>.500</td>
</tr>
<tr>
<td></td>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td></td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>203,643</td>
</tr>
<tr>
<td></td>
<td>Df</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. .000</td>
</tr>
<tr>
<td>Compatibility</td>
<td>.671</td>
</tr>
<tr>
<td></td>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td></td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>425,877</td>
</tr>
<tr>
<td></td>
<td>Df</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sig. .000</td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td>.702</td>
</tr>
<tr>
<td></td>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td></td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>199,510</td>
</tr>
<tr>
<td></td>
<td>Df</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sig. .000</td>
</tr>
</tbody>
</table>

The KMO test and Barlett’s Test of Sphericity were performed to further assess compatibility of the data with factor analysis. The KMO test is presented as a measure of sampling adequacy (Hair et al., 2006). It reveals the levels of covariance among the items that combine into a measurement scale. The minimum acceptable value for KMO is 0.5 (Kaiser & Rice, 1974). As shown in table 5, the outputs of the KMO test did not cross the demarcation line for sampling
adequacy. With the exception of performance expectancy whose KMO was fairly acceptable, all the measurement scales were presented with KMO values that are greater than 0.5. In parallel, Barlett’s Test of Sphericity was performed to further assess the covariance of the study items in the correlation matrix (Tobias & Carlson, 1969). Barlett’s Test of Sphericity displays the degrees of homogeneity between the study items in order to determine the compatibility of the data with factor analysis. For instance, in a data set where the covariance between items is symmetric, factor analysis cannot be performed because the data is statistically insensitive to factor loading. Eventually, for Barlett’s test to be significant, it must be above 0.001. Table 5 displays the test’s chi-square values, which were all considerably superior to the critical limits for Sphericity.

Confirmatory factor analysis

CFA interrogates the reciprocity between a research model and the source theory by which the model is conceived; also, CFC is used to substantiate the legitimacy and practicality of the measurement theory (Hair et al., 2006). Most importantly, CFA is a valid index of convergent validity and discriminant validity, which are the core constituents of construct validity. In this study, CFA was used for the estimation of convergent validity and discriminant validity.

Convergent validity

Convergent validity assesses the degrees of correlation among variables that are intended to measure the same construct. Indeed, convergent validity is a prerequisite for attaining construct validity (Sekaran, 2003; Zikmund et al., 2013). Average Variance Extracted (AVE) was calculated for sustaining convergent validity. Indeed, AVE is valid estimate of convergent validity as it determines the levels of variance in a distinct construct by estimating the standards errors obtained for the same construct. AVE deploys factorial loadings to corroborate the accuracy of the measurement model where the latent variables in each construct must belong together, manifesting acceptable amounts of variance. In this study, the values for AVE were manually calculated by dividing the sum of the squared factor loading by the degrees of freedom in each construct. It should be noted that an acceptable value for AVE equals 0.5 while higher values give more evidence of convergent validity (Hair et al., 2006).

Table 7. AVE and composite reliability for the study variables

<table>
<thead>
<tr>
<th>Construct</th>
<th>Average Variance Extracted</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>0.498</td>
<td>0.796</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.510</td>
<td>0.795</td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td>0.889</td>
<td>0.941</td>
</tr>
<tr>
<td>Compatibility</td>
<td>0.792</td>
<td>0.919</td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td>0.704</td>
<td>0.876</td>
</tr>
</tbody>
</table>
As shown in table 7, with the exception of performance expectancy, all the constructs were presented with AVE values that were above 0.5. The AVE for performance expectancy is 0.498. It is only 0.002 below the bottom line for AVE. Here, it is worth mentioning that an AVE value of 0.4 is accepted when it combines composite reliability that exceeds 0.6. That was the case for performance expectancy, which has a composite reliability that equals 0.796.

**Discriminant validity**

Discriminant validity interrogates the organic unity by which a construct could be distinguished and valued for its unique contributions to the measurement model where it belongs. The items in a measurement model must load highly on their respective constructs. Their degrees of correlation must exceed any possible correlations with any other constructs other than theirs. In this research, discriminant validity was assessed by comparing the values for AVE with the squared root estimates of correlation among the study constructs (Hair et al., 2006).

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td><strong>0.498</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.208</td>
<td><strong>0.510</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Feedback</td>
<td>0.146</td>
<td>0.139</td>
<td><strong>0.889</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compatibility</td>
<td>0.048</td>
<td>0.086</td>
<td>0.085</td>
<td><strong>0.792</strong></td>
<td></td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td>0.051</td>
<td>-0.007</td>
<td>0.166</td>
<td>0.384</td>
<td><strong>0.704</strong></td>
</tr>
</tbody>
</table>

**Discriminant validity**

The values in bold in the main diagonal are the values of AVE. The other entries are the inter-item correlations.

As shown in table 8, the AVE values exceeded the average inter-item correlation for all the study constructs. Hence, there was evidence of discriminant validity. All the items related highly to their measurement scales, featuring distinct attributes that accentuated the unique character of the constructs under investigation.

**Assessment of the measurement model**

A measurement theory differs from a structural theory (Hair et al., 2006). A measurement model, also referred to as measurement theory or a causal theory, determines the scope of correlation and covariance between the measurement items and the factors they load on. A measurement theory is set to assess the reliability and validity of the measurement scales, and this is where EFA and CFA are most needed. The assessment of the measurement theory in this research is carried out by using the goodness-of-fit test (ibid). The statistical analyses used in this research are displayed below:

- Degree of freedom (df) test
- Chi-square (CMIN/df) test
- Comparative fit index (CFI)
- The goodness-of-fit index (GFI)
• Tucker-Lewis index (TLI)
• Incremental-fit index (IFI)
• Root Mean Square Error of Approximation (RMSEA)

Using AMOS, a measurement model was drawn to determine the relationships between the latent variables and the observed variables together with the covariance of the constructs under investigation. The measurement theory in this research is graphically represented in figure 4. Also, the outputs of the measurement model are optimised to illustrate the goodness of fit indices.

![Diagram of measurement model]

**Figure 4.** The measurement model

**Table 9: Goodness-of-fit results**

<table>
<thead>
<tr>
<th>Goodness of fit indices</th>
<th>Measurement results</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td>94</td>
<td>&gt; 0</td>
</tr>
<tr>
<td>df/ X²</td>
<td>1.56</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>CFI</td>
<td>0.95</td>
<td>&gt; 0.90</td>
</tr>
<tr>
<td>GFI</td>
<td>0.90</td>
<td>&gt; 0.90</td>
</tr>
<tr>
<td>IFI</td>
<td>0.95</td>
<td>&gt; 0.90</td>
</tr>
<tr>
<td>TLI</td>
<td>0.94</td>
<td>&gt; 0.90</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.06</td>
<td>&lt; 0.08</td>
</tr>
</tbody>
</table>

As noted in table 6, all the goodness of fit indices are satisfactory. The value for the df/ X² is reasonable and it corroborates the kurtosis estimates of normality displayed earlier in this study in the data screening section. Indeed, the df/ X² does not only sustain the goodness-of-fit of the measurement theory, but it also substantiates the normal distribution of the data. In parallel, The CFI value indicates an acceptable range of model fit. CFI measures higher than 0.95 support the legitimacy of the data in relation to the hypothesised model. The GFI value in this model equals the bottom line of reasonable model fit and it emphasises the consistency of the measurement
model with the covariance matrix. TLI measures the model fit against the null hypothesis; also, it reports on the degrees of correlation between variables. The TLI measure in model is situated above 0.90, which is suggestive of a satisfactory correlation average between the study variables. IFI is presented as a continuum for assessing the model fit, in which 0 designates total absence of fit while 1 designates maximum estimation of fit. The IFI value in this model demonstrates high-level fitting attributes as it reaches a value of 0.94. RMSEA is a goodness of fit measure that interrogates the parameters of the measurement model against the covariance of the population. The RMSEA in this model falls below 0.08, which is below the upper limit of good fit.

The structural model
A structural model belongs dependently of a previously validated theory. While a measurement theory tests the relationships between the measurement items and the factors they load on, a structural model probes into the causal relationships between the dependent variables and the independent ones. In a structural model, a different kind of analysis is carried out. Path analysis is definitely the most important particularity of structural modelling. It deploys different levels of regression analysis to reveal all itineraries of causation in a structural model. In parallel, structural modelling enables a different kind of validity that is embedded in the nomological connections between the constructs under investigation (Anderson & Gzibing, 1988). It interrogates the feasibility of the hypothesised associations among the constructs of study. The nomological validity of the structural model in this study was evaluated by inspecting the standardised path coefficients. For the standardised path coefficients to be accurate, they must have a p-value that is less than 0.05 together with a critical ratio of more than 2. The p-value is a reverse estimation of the structural model. It tests the accuracy of the model against the null hypothesis. P-value increases in parallel with the potential inaccuracies in that might interfere with the assumed relationships in the structural model. The t-ration further corroborates the statistical incoherencies in the model.

Table 10. Structural estimation of the research model

<table>
<thead>
<tr>
<th>H</th>
<th>Paths</th>
<th>Estimates (β)</th>
<th>S.E</th>
<th>C.R (T-value)</th>
<th>P</th>
<th>Hypothesis testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>BI PE</td>
<td>.069</td>
<td>.086</td>
<td>.802</td>
<td>.423</td>
<td>Not supported</td>
</tr>
<tr>
<td>H2</td>
<td>BI EE</td>
<td>.106</td>
<td>.896</td>
<td>1.106</td>
<td>.269</td>
<td>Not supported</td>
</tr>
<tr>
<td>H3</td>
<td>BI TF</td>
<td>.152</td>
<td>.074</td>
<td>2.040</td>
<td>.041</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>BI C</td>
<td>.334</td>
<td>.059</td>
<td>5.624</td>
<td>***</td>
<td>supported</td>
</tr>
</tbody>
</table>

In the light of the structural estimation of the model, H3 and H4 were supported and there was lack of support for H1 and H2. The outputs of structural modelling revealed that the direction from performance expectancy to behavioural intention was not statistically significant. The significance level for the nomological connection between the two constructs was exceeded (T/CR= 0.82; p= 0.42). Simultaneously, the effort expectancy dimension failed to predict BI (T/CR= 1.10; p= 0.26). On the other hand, the hypothesised connections in H2 and H3 were statistically significant. The path from teacher feedback to behavioural intention sustained statistical support for H1. Also, compatibility was found to have a direct impact on behavioural intention.
Discussion
The current research model emphasises the inclusive character of the UTAUT model. As noted in the research design chapter, the UTAUT model offers a theoretically enhanced framework by which the determinants of technology acceptance could be researched in different contexts. After careful assessment of the multiple relationships within UTAUT, a modified version of the model was hypothesised then validated to suit the educational discourse in general and the EFL context in particular. The technology acceptance model in this research emphasises four directions connecting performance expectancy, effort expectancy, teacher feedback and compatibility to behavioural intention, also referred to as the determinants of behavioural intention to use MALL.

Performance expectancy
The relationship between performance expectancy and behavioural intention is not exclusive to the current research model. It is an established tradition in the technology use and acceptance field of research. In this study, the hypothesised relationship between performance expectancy and behavioural intention is not supported (T/CR= 0.82; p= 0.42). Also, it is inconsistent with original UTAUT where performance expectancy successfully predicts behavioural intention. The lack of support for performance expectancy and behavioural intention agency has been witnessed in many modified and unmodified applications of the UTAUT model (Barnes & Vidgen, 2009; Cornacchia, Papa, Livi, Nicolo & Bruno, 2008; Jayasingh & EZE, 2009; Pai & Tu, 2011). The lack of correlation between the two constructs does not signal a statistical inaccuracy or any other incoherencies in the structural model. Instead, it emphasises the evolving character of the UTAUT model, which is the consequence of the increasing number of technologies that are introduced and used in different environments. The poor linkage between performance expectancy and behavioural intention is the function of both the technology being assessed and the users. The fact is that we cannot expect all forms of technology to have the same effect on a uniform population of users. This would be a simplistic approach to technology use and acceptance. The same technology could activate divergent itineraries of acceptance because of many factors that are intrinsic and extrinsic to the technology in question. The intrinsic factors relate to capabilities of the technology while the extrinsic factors designate the users’ perceptions of the technology. The offerings of a distinct technology might be perceived differently by users who have different backgrounds and who depend on the technology for different purposes as well. The technology acceptance model in this research is designed to synchronise with the fundamentals of the teaching of English as a foreign language in Moroccan public high schools. An explanation for the poor linkage between performance expectancy and behavioural intention must emphasise the institutionalised character of the technology treatment. Knowing that there is no institutionalised incorporation of technology in Moroccan public schools, students may not have had enough experience with educational technology to be sure about the impact it has on academic activities.

Effort expectancy
The outputs of structural modelling revealed poor linkage between effort expectancy and behavioural intention (T/CR= 1.10; p= 0.26). The lack of support for effort expectancy as a determinant of behavioural intention is not exclusive to this research model. In many implementations of UTAUT, the relationship between effort expectancy and behavioural intention does not meet the requirements for a statistically significant equation (Holzmann, Schwarz, & Audretsch, 2018; Thomas, Singh & Gaffar, 2013; ŠUmak, HeričKO, & PušNik, 2011; Bekkering...
& Hutchison, 2009). All these studies are centred on an educational technology or system. They all depart from the theoretical basis of UTAUT to produce personalised technology acceptance models that are simultaneously statistically significant and true to the context of implementation. The lack of support for effort expectancy in these models does not fully represent the theoretical landscape for educational technology in general and mobile learning in particular. Contradictory findings are indispensable resources for the upgrade of the existing knowledge on technology use and acceptance. The technological trend in education is much wider. An increasing number of studies are conducted for the purpose of activating new perspectives from where to conceptualise a valid integration of technology in education.

**Teacher feedback**

In this technology acceptance model, teacher feedback is core determinant of MALL. The effect of teacher feedback on behavioural intention to use MALL is this research model’s contribution to the theoretical basis of UTAUT. It is evident that the teacher feedback construct suits the context of this research. It is optimised to synchronise with the realities of the educational discourse. The legitimacy of teacher feedback as a predictor of behavioural intention to use WhatsApp-based language learning is well established in the literature on language learning. In many studies, teachers’ feedback is exposed and researched for the positive effect it has on students’ performances (Lee, 2008; Quinton & Smallbone, 2010). Also, there is evidence for the legitimacy of teacher feedback in the technology use and acceptance field of research. Teacher feedback relates to the “social influence” construct in UTAUT, which is defined as “the degree to which an individual perceives that important others believe he or she should use the new system” (Ventakesh et al., 2003, p. 451). Both constructs emphasise the influence of others on use behaviour. Teacher feedback is well suited to the context of language learning because it delimits the wide scope of social influences by means of exclusive emphasis on students’ perceptions of the feedback from teachers. In this study, the effect of teacher feedback on behavioural intention is statistically significant (T/CR= 2,040; p=, 041). The fact is that the e-learning context has particularities which must be considered in any conceptual model for technology use and acceptance. The significance of teacher feedback as a predictor of behavioural intention to use MALL is well observed from the lens of the Diffusion of Innovation Theory (Rogers, 1983). Use and acceptance of a technology require the users to go through a five-stage innovation decision process: the knowledge stage, the persuasion stage, the decision stage, the implementation stage and the confirmation stage. In the knowledge stage, the user mentally recognises the capabilities of the innovation. The persuasion stage designates the feedback the individual has about the merits of the innovation. In the decision phase, the user explicitly rejects or endorses the use of the innovation. The implementation stage concretises the behavioural use of the technology. In the confirmation stage, the user seeks endorsement and reinforcement for prospective use of the innovation. In the context of this research, the WhatsApp-based treatment is an innovation that requires the students to go through the innovation decision process. Throughout the whole process, teacher’s feedback is essential and consequential because it facilitates the transition from one stage to the other. The feedback of the teacher is well positioned to expose the merits of technology-enhanced language learning. Also, the intervention of the teacher in the adoption process helps clear the uncertainties associated with a user-unfriendly innovation. The odds for adoption increase in parallel with the teacher’s ability to give incentives and reinforce the use of the technology. Indeed, there is statistically significant
linkage between teacher feedback and behavioural intention that is also true to the realities of the educational discourse.

**Compatibility**
The conceptual model in this research gives evidence of the positive impact of compatibility on behavioural intention (T/CR= 5.62; p= 0.00). Compatibility is a statistically significant predictor of behavioural intention to use mobile learning. The attributes of the WhatsApp treatment are found to be supportive of students’ perception of the utility of mobile technology in language learning. The particularities of mobile learning are well suited to the meanings students attach to language learning. Obviously, students’ beliefs and cultural values do not conflict with the educational incorporation of mobile learning for language learning purposes. Also, students’ perception of mobile learning is endorsed because of the latter’s ability to meet their needs. In the educational context, the needs of students constitute a controlling factor for endorsement and adoption. This is the reason why maximum attention needs to given to the planning aspects of MALL. Prior to the implementation of technology, students should be aware of the attributes of the target technology together with the rationale for its use. This was the case for this research. Prior to the WhatsApp-based treatment, all the participants were briefed on the utility of the technology and the different protocols of implementation.

**Conclusion**
The conceptual model in this research connects to the fundamental structures of UTAUT to produce a theoretically enhanced framework for understanding the determinants of MALL. Four factors were researched for the influence they have on behavioural intention to use WhatsApp-based language learning. The effects of teacher feedback and compatibility on behavioural intention were statistically significant while there was lack of support for the hypothesised direction linking performance expectancy and effort expectancy to behavioural intention. The outputs of the current research model are consistent with prior implementations of UTAUT. They successfully emphasise the fast evolving character of the technology use and acceptance field of research.

**About the Author:**
*Nabil Morchid,* is a PhD candidate. His doctoral thesis is on acceptance and use of mobile assisted language learning. He also conducts research in gender studies. He published an article on female role associations in Moroccan print advertising. He is currently working as an assistant professor of English at the Faculty of Letters and Human Sciences, Ibn Tofail University. https://orcid.org/0000-0002-3430-2483

**References**


Massive Open Online Courses : En Route to Communication Skills Acquisition

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Abstract
Technology has its own forte and has been making its waves through the educations’ heart among educators and especially young learners. In conjunction to the waves of technology and the era of globalization, there is also a demand for excellent communication skills among today’s younger generations especially university students. University students are expected to be well equipped with proficient English language and outstanding communication skills which is what they are currently lacking at. Therefore, a specific Massive Open Online Courses (MOOCs) for English for Communication is designed and developed to provide learners with the ladder towards good communication skills. This study is a design and develop research of study which consists of twenty-two undergraduate students in a public university and the whole duration of this study is fourteen weeks altogether. The particular well developed MOOCs then later implemented to the learners and learners evaluation on the course are taken into consideration. This study intended to accommodate students with Massive Open Online Courses (MOOCs) and to investigate the learners’ perceptions on the use of MOOCs in helping them to develop good communication skills. This study also evaluated the developed MOOCs’ usability and the students’ interaction level during learning along with the impacts of particular developed MOOCs towards their development of communication skills. The findings gathered have proven that this particular developed MOOCs of English for Communication has helped learners to further improve on their communication skill acquisition that would help them to be a better critical thinker and an autonomous learner.

Keywords : Communication Skills, Digital learning, ESL Learning, Massive Open Online Courses (MOOCs),
Introduction

In today’s era of fourth industrial revolution, it is very important for younger generations to acquire good communication skills especially using English language (Jain et al., 2019). It is needless to doubt how globalization has made it very important for today’s younger generations, university students specifically to prepare and equip themselves with these soft skills. Students are expected to be able to make use of English language to discuss, argue and defend their thoughts along with incorporation of aspects of confidence building, visual aids presentation and audience handling. However, mostly university students in Malaysia encounter troubles in communicating well, especially using English language. They also struggle in presentations, speeches and sometimes lack of critical thinking and problem-solving skills.

A potential solution for this problem is the implementation of massive open online courses (MOOCs) for Communication Skills to accommodate students’ need in fulfilling their communication skills competencies. The competency is related to a set of skills such as critical thinking, the art of speaking, and building up confidence level. In today’s world, technology has been part of the teaching and learning process, especially in higher education. Massive open online courses (MOOCs) have been stated as one of the most important and well-known trends in higher education in today’s era (Baturay, 2015). There have been a lot of past researches involving the use of MOOCs and E-Learning for English Language lessons and courses. Daud et al. (2018) have done a study on the use of MOOCs for Literature Integrated Language Classroom for Development of Higher Order Thinking Skills (HOTS). However, research and development on MOOCs tailored specifically for English for Communication is lacking in Malaysia. As such, to solve these problems and fill these gaps, this study is intended to investigate the needs of undergraduate students from a public university and develop a MOOC on English for Communication Skills which is geared towards complying English language communication skills competencies for these students. This study also evaluated the developed MOOCs’ usability and the students’ interaction level during learning along with the impacts of particular developed MOOCs towards their development of communication skills.

Literature Review

**Massive Open Online Courses (MOOCs) in the Digital Era**

The existence of technology and e-learning has caused the routine of digital learning to be making its waves in education. Digital learning is basically the use of Internet to help students to gain more knowledge freely and students are not constrained or limited to only the knowledge given by the lecturers in the classroom during the lecture sessions. With the help of digital learning as the platform, students will be able to develop self-paced learning with the help of the specific course modules and tasks given by the lecturers to help probing them with their learning process and enhance student-centred learning. Technology and students are inseparable in today’s world. Students are taking advantage by accessing their lessons online (Mc Greal, 2018). Cabrera and Ferrer (2017) believed that students nowadays would prefer technology as part of their learning as it is more handy for them to access the information using technology wherever and whenever they want. Technologies have played an important role for over two decades now in facilitating access to both education and access training. Even both formal and informal learners are also now assessing learning materials through Internet and websites (Mc Greal, 2018). In Malaysian context, Malaysian Communications and Multimedia Commission has revealed that youths between the
ages of 20-24 are the most active users of Internet (Zulkepli, et al., 2018). Advantages of using Information and Communication Technology (ICT) and technology in learning and teaching session were reported to be beneficial in attracting students’ attention, facilitating students’ learning process, helping to improve students’ vocabulary and also promoting meaningful learning to students. (Yunus & Suliman, 2014). Digital learning has also become part of the common intervention in teaching and learning process. It is believed that “one of the main bridges between the physical and digital applications enabled by the fourth industrial revolution is the internet of things (IoT) or is also known as “internet of all things” (Schwab, p.18, 2016). Internet of all things can be described in simpler words as a relationship between things and people that made it possible by connected technologies and also various platforms. The digital revolution is inventing new approaches in which individuals and institutions engage and collaborate.

With the existence of technology and ICT and the rapid use of it in teaching and learning process, MOOC that stands for massive open online course is a web-based course available for free to any participant from all around the world (Cormier, & Siemens, 2010; Kop & Caroll, 2011; Abeer & Miri, 2014) started to arise. MOOC provides free access to high-quality learning materials, offered by elite universities and they are conceptualised as online learning environments in which participants worldwide can create, research and share open educational resources (Kop & Caroll, 2011; Abeer & Miri, 2014). The brief history of MOOC Courses shows that MOOCs have been developing successfully since 2008, with the clear purpose of not only to provide and enhance more learning opportunities but also to improve students’ learning experience (Ulrich & Nedelcu, 2014). MOOC is one of the most recent innovations in education and has represent a current trend in online education (Almahdi & Sulfeeza, 2017). Since 2014, more than 400 universities around the world has started to be using MOOC and more than 73 universities have combined two styles of education: traditional class with advanced MOOC in addition to the teaching and learning session.

In line with the revolution of 4th Industrial Revolution and 21st Century Learning, the Ministry of Higher Education Malaysia, in collaboration with 20 public universities, have launched the Malaysia MOOC initiative. The initiative was launched in September 2014 in line and accordance to the Malaysia e-Learning policy. This initiative is also part of the aspirations (shifts) of the Malaysia Education Blueprint 2015-20125 aspires “globalized online learning” in its ninth shift. There has been many researchers all over the world investigated the usefulness of MOOCs towards the education. Zarei and Supyan (2016) discuss on a case study of blog-based language learning and they figured that technological medium do provide learners a space where they can interact with each other even outside the classroom. Research has shown that online learning can be as effective as face-to-face courses provided that they are equipped with well-designed interaction activities (Song, Rice & Oh, 2019). They also furthered stated in their study that tutors plan an important role to provide learners with meaningful interactions using online learning. Learners indeed need immediate feedback from the tutor. This issue is also proven agreed by Nordin et al., (2016) in their study on the factors for development or learning content and task for MOOCs. They believed that adaptive feedback during learning is useful in assisting learners that need assistance in their learning. However, there are also challenges to the use of MOOCs in today’s education waves. Cabrera and Fernandez-Ferrer (2017) did a study investigating on the perceptions and opinions of the teachers of educational technology from a traditional universities
and from a distance universities. Their findings have found out that traditional universities are concerned about issues that are not worried or even raised by the virtual university teachers, and vice versa. Traditional teachers believed that MOOCs do not provide support learning instructions needed for the learners and teachers still need tutors’ guidance for the learning process to fully complete. Nonetheless, on a positive note, Verstegen et al., (2018) discussed on whether it is possible for virtual communications and collaborations to happen with MOOCs and they have discovered that it is possible for virtual, online teams to collaborate on learning tasks without extensive guidance but it required additional communication and technology skills support.

**MOOCs as the booster of English Language Learning and Communication Skills**

Recently, the critical issue we encounter among today’s younger generation of students is that they lack of communication skills. There have been so many research on the matter of critically lacking in speaking skills among ESL learners. Both Sabri and Qin (2014) and Ansari (2015) had a study on speaking anxiety among learners and they figured out that most learners are not comfortable in communicating using English language due to a few reasons including speaking anxiety, lack of confidence and lack in knowledge of the language. However, the emergence and the use of technology and ICT in education has brought quite of an impact and waves especially in English language teaching and learning. Gunuc and Babacan (2018) figured that technology integration in English language teaching and learning is helpful and crucial in the development of basic English language skills such as listening, reading, writing and the most important skill, which is speaking. They also further highlighted that technology integration do bring benefits in the process of teaching and learning English language. Technology integration is to be said is beneficial in encouraging students to learn actively, cooperatively based on critical thinking skills and helps improves communication skills. Rodrigues and Vethamani (2015) has also proven their stand on the impact of online learning in the development of speaking skills. They believed that online learning approach do encourage the students to practice their oral conversations in their own convenient and pace. They also stated that online learning approach also helps students to be autonomous learners in language learning. Banditvillai (2016) then later pointed out the same matter in his study on enhancing students’ language skills through blended learning. His findings have found out that online practice is beneficial to help learners enhancing their four language learning skills especially speaking skills as well as motivation level and autonomous learning.

Technology offers chances for communicative language learning (Laborda, et.al, 2016). Muruganantham (2015) in his study stated how the learning materials designed based on technology will facilitate the learners to achieve better performance. McClanahan (2014) in her study of training using technology in the adult ESL classroom has proven how learners truly benefit from an integration of technology as the use of technology indeed develops both job-related and communication-related skills at the same time. She also has her own perspective of how she believes that the technology, by nature provide more opportunities for authentic input and interaction which eventually can contribute to ESL learners’ communicative ability. This is further agreed by Banditvillai (2016) in the findings of his study where he has figured that online practice is directly beneficial to enhance learners’ language learning skills and learners’ motivation. Other than that, Yunus (2018) in her paper of innovation in education and language learning in 21st century also believed that there is a need for the use of the technology as part of the teaching and learning pedagogies. She did also provide her own hope of how we should look at helping our
learners to communicate effectively in international settings, not only on their accuracy use of the language. The focus on teaching and develop learners’ soft skills and critical thinking skills is also as equally important. Hashim et al. (2018) in her findings have found out that MOOC has been proven to be able to provide positive support for students to take charge of their own learning especially in ESL learning. The opportunity for learners to work collaboratively in MOOC makes them to be able to improve on their language skills and even built their self-confidence. Nordin et al. (2015) have conducted a study on technology acceptance of MOOCs in Malaysia and the study has presented the findings of MOOCs were very well accepted as the technology for learning. Hence, it is believed that designing and developing a MOOC course for English Communication Skills is possibly one of the best ways to help learners to develop good communication skills along with the critical thinking and problem solving skills.

**Distance Learning vs Constructivism as the Underpinning Theory in MOOCs for English for Communication**

A fundamental constructivist belief is that learners construct knowledge through their own prior knowledge and experiences. Nordin et al (2016) had their own perspective of related learning theories in developing and designing a MOOC course. They believed that designing a good MOOC course is based on the distance learning theory founded by Moore (1972) which best describes the concept of distance education where the MOOC acts as the platform for learners to learn with the existence of a tutor or a teacher virtually. However, Wang and Hsu (2009) believed that designing and developing MOOC with the use of ADDIE model as the framework is related to the theory of constructivism (Vygotsky, 1896) as learners curiosity is aroused through their interactions with the stimulators which in this situation is the learning materials provided and designed in the MOOC course. As communication skills is enhanced through self-learning and experience, also there is not much of a very rigid modules needed to help learners to improve on their English communication skills, thus the theory of constructivism is considered to be the best theory to be applied in this study. Learners will make use of their own prior knowledge and experience to accomplish the tasks prepared for them in the MOOC developed and eventually helps them to construct a better English communication skills along with good critical thinking and problem solving skills.

**Methodology**

A design and developmental research approach originated from Richey and Klein (2014) is applied in this study via five phases in accordance to the ADDIE model namely analysis phase, design phase, development phase, implementation phase, and evaluation phase. The goal of the use of a design and developmental research is to help researcher to design learning activities that are consistent to the learning objectives and then evaluate the learning outcomes (Wang & Hsu, 2009). ADDIE model was adopted to ensure that implementation of this module would help learners to improve on their knowledge and also their communication skills effectively. The use of instructional research design is also to ensure the learners to have effective and meaningful learning sessions. Hence, it is believed that through a design and developmental research, the usefulness of the module developed in Massive Open Online Courses (MOOCs) on the respondents can be further explored and investigated by the researcher as the module itself can be implemented on the students and the results can be measured.
The study involved a population of undergraduate students in a public university in Malaysia. The research sample chosen for this study are specifically the twenty-two second year undergraduate students of computer science course. There were a few instruments used in this study in order to gain the objectives of this study. An interview with the students, specifically a semi-structured questions interview were done to identify the students’ needs analysis. It is believed that personal interview would be the best instrument in order to attain this study’s objectives and purposes. Interviews come with different types and it is believed that the semi-structured interview is the best and the most useful format in collecting data. A semi-structured interview is not highly constructed, and respondents were simply able to answer all the questions freely about whatever crossed their minds. This particular interview was focusing more on students’ problems and struggles that they encounter when they are needed to communicate and have their presentations in English language. They were also asked on what they think of their own weaknesses that drives them to the barriers towards good communication skills.

Other than that, a specific module is also part of the instruments involved in this study. A specific module designed in Massive Open Online Courses (MOOCs) related to communication skills was created and implemented to the students, then later the progress of their level of development of English communication skills were observed through the tasks given by the researcher throughout the entire implementation process. The evaluation process also involved students to provide their own reflection of the whole MOOC developed and how the tasks in the MOOCs have helped them with their communication skills development. Once the reflections have been collected, the analysis of the results were carried out based on themes and categorization process.

Findings and discussion

Abstraction on the Facet Towards Lack of Communication Skills
From the entire sample, a total of 16 male and 6 female undergraduate students were involved. The respondents are to be considered as an intermediate level of proficiency learners. During face-to-face learning in the classroom sessions, they are to be seen and observed as lacking in communication skills. They had troubles in conveying their messages across during two-way communication activities in classroom. Other than that, the students were also seemed shy and rarely willing to participate during the session. Hence, it is believed that there is a need for an antidote in helping them to acquire good communication skills for future benefits. In conjunction to that, their needs analysis on the factors contributing towards their lack of communication problem and also their thoughts on the barriers towards communication skills were investigated.

Based from the semi-structured interview with the respondents, it has been gathered that there were a few factors they believed that they encounter which lead them to lack of communication skills and the barrier towards good communication skills. One of the main issues is lack of confidence level. Majority of them mentioned that they are shy and have speaking anxiety. They tend to be very cautious and sometimes not willing to participate in any of the discussions or during presentation because they are aware of their level of proficiency and making them to encounter anxiety. This issue is obviously caused by their lack of information or knowledge on something or even with the language itself which is English language. They believed that one of the problems they encounter that leads them to the lack of communication skills is that
they lack vocabulary and also afraid of making grammatical mistakes while speaking or communicating in English language. This matter is agreeable by both Ansari (2015) and Sabri and Qin (2014) in their study on speaking anxiety as one of the reasons for lacking communication skills among ESL learners. In relation to speaking anxiety, the respondents also mentioned that they do not get enough chance for ample of practices due to more or less what they called it as an ‘unhealthy environment’. The unhealthy environment that they meant is that the lack of support from people surrounding and also lack of opportunity given to them in practicing their communication skills.

The findings from the needs analysis has proven that having only face to face classroom session to help students to build and acquire good communication skills in English language is not sufficient. The belief to have the help of technology as part of the learning and teaching session has been proven to be helpful in language learning. A few researchers have agreed to this matter namely Mclanahan (2014), Gunuc and Babacan (2017), Yunus (2018) and many other researchers. They all believed that technology as in open learning, especially MOOCs has its own contributions in helping learners to acquire good communication skills. Hashim et al. (2018) supported this by stating that MOOC has been proven to be able to provide positive support for students to take charge of their own learning especially in ESL learning. MOOCs has also proven to be able to help learners to work collaboratively with their peers and eventually help them in their confidence level. Not to mention by the fact that MOOCs is a very convenient platform and very well accepted by ESL learners according to Nordin et al (2015) in their study on the level of MOOCs acceptance for language learning.

**Massive Open Online Course (MOOCs) : English for Communication**

In conjunction to this, a platform using MOOCs for English for Communication course is designed then later built. A module consists of nine units of topics and discussion is built. The units in the module include:

1. The art of presentation skills - learners are required to identify their own strengths and weaknesses when it comes to presentation.
2. Effective communication skills - learners are required to brainstorm and identify the strategies they can come up with to help themselves with their own weaknesses when it comes to presentation along with some strategies to help them build self-confidence.
3. Miscommunication - this topic requires learners to give an example of miscommunication and identify the reasons why miscommunication happen.
4. Critical thinking - learners are exposed to the stages of moral development in this topic and learners are asked to give their own thoughts and opinions on a dilemma.
5. Analytical tools - this topic helps learners to be exposed with swot analysis and fishbone diagram.
6. Case study with the use of F3EAD - this topic requires learners to analyze a case study and give their own judgments based on the case study.
7. Caselet - this topic encourages learners to make use of some online tools available in the Internet to create a poster themed ‘Humanity’.
8. Language and Art - this section is where learners are able to be creative and express themselves by creating a poem that best describes their emotions and feelings.
9. Communication for society - this topic is the last topic that concludes the module which also aims to produce an end product. This topic needs the learners to create a video of an advertisement promotion ‘An Act of Kindness’.

**The Implementation of MOOCs for English for Communication**

Once the platform of MOOCs for English for Communication is designed and built, the course is implemented to the learners in a duration of 14 weeks time. The implementation is held in accordance to their weeks per semester. The implementation of MOOCs is also held as a supplementary of blended learning of virtual learning with face to face classroom. For the whole 14 weeks, learners are asked to do the tasks given in a topic each every week from the MOOCs blended with the face to face teaching and learning session. Learners cooperated very well and the tasks provided were all accomplished by them efficiently. The implementation of MOOCs to the learners can be seen as a platform for them to further enhance their creativity skills and also critical thinking skills. Based on the implementation done, it can be seen that learners have expanded their level of critical thinking by making their own thoughts and opinions on a few case studies and also on a few dilemmas provided.

This particular MOOCs courses is designed and built to further help learners to be more open with their thoughts and judgements along with helping them to be more critical in their thinking. At the same time, this particular MOOCs has also provided the learners with more chances to work collaboratively with their peers and also not to mention, the chance for them to be an autonomous learner themselves. The materials provided in the MOOCs course are not rigid, hence learners are able to play around with the materials given as to arouse them with their thinking skills but at the same time able to relate the issue back to themselves which is also agreed by Wang and Hsu (2019) on their thoughts on how the concept of MOOCs should be done to help learners with their communication skills. This is where fundamental constructivist have their stand on. Constructivist believes that learners learn through their prior knowledge and experience. Hence, it is observed that through the implementation of this course, the theory of constructivism is relatable to this study as learners tend to make use of what they have in themselves based on their prior knowledge and experience to accomplish the tasks provided to them in the MOOCs. The materials provided to them are just merely to help them to probe back their prior knowledge.

**Learners’ Evaluation on the Use of MOOCs for English for Communication**

Once the implementation of the MOOCs for English for Communication Course has been conducted, learners evaluation and thoughts on the course are taken into consideration for further improvements. The learners’ reflection on their thoughts and perceptions of the particular course along with the materials prepared are analysed then categorised into a few categories on how a MOOCs for English for Communication is able to help them in acquiring good communication skills. The findings on learners’ evaluation towards the impacts of MOOCs of English for Communication are gathered and categorised into four main themes namely a) the booster for critical thinking skills and self esteem, b) interactive and meaningful materials, c) the dose towards good communication skills, and d) the features of MOOCs.
A. The booster for critical thinking skills and self esteem
Learners believed that the particular designed and built MOOCs for English for Communication helps them in improving their critical thinking skills by making to need to think out of the box to solve or accomplish the tasks provided in the MOOCs. They also confessed that the tasks given to them in the MOOCs needed them to do quite a bit of research and reading, hence making them to be more critical in giving their thoughts beforehand. This is in a way parallel to the theory of constructivism by Lev Vygotsky (1896) which is also agreed by Wang and Hsu (2009) on how MOOCs are able to provide learners with autonomous learning and they only need their prior knowledge, also experiences to accomplish the tasks given to them.

On the other hand, MOOCs is also believed to have helped learners with their self-esteem. A few of the learners mentioned that the particular MOOCs has helped them to be more confident especially with their English language learning. They are now more confident in communicating with their peers using English language. Quoting a few of the learners responded on the issue of self-esteem and confidence level. ‘It is very helpful because i got no skill in communication. But since you taught me, somehow it give confidence to communicate with my friends in english. I always try speaking with them so i can learn from my mistakes’, ‘i found that i am now more confident to stand and speak in front of the crowd and communicate with others using English’.

B. Interactive and meaningful materials
The effectiveness of materials for the learners are also taken into considerations. Learners put their own opinions on the materials provided in the particular MOOCs for English for Communication and learners do think that the materials are very helpful and interactive. ‘yes very helpful. I like all the task that you give in mooc. its very simple task but very easy to do. All students can do the task immediately’. Mostly materials provided in the MOOCs are some videos and pictures to probe the learners’ prior knowledge in each topics. Learners thought that the materials and tasks given to them are very meaningful as they are able to relate back to themselves and accomplish all the tasks. Quoting one of the learners’ response towards the materials ‘I hope this materials will be use in all learning process as it leads the students into being a new person and get them out from their comfort zone.’. The particular learner hopes for all the materials to be used continuously for its effectiveness. The learners also mentioned how interesting the materials provided in the sense of how only videos and photos were given instead of long texts that will demotivate them to accomplish the task. ‘I do like the materials provided because a lot of videos, images contain in the subject and not that old school boring text that no one will be attract to read. Hence the videos and images help me better in understanding the new information and education also makes me understand it quicker than before. The mooc also attract me to finish the task’. This is parallel to what has been proven by Muruganantham (2015) in his study on how learning materials designed based on technology are proven to be able to facilitate the learners to achieve better performance along with helping them to improve general knowledge.

C. The dose towards good communication skills
Learners do agree on the particular built and designed MOOCs for English for Communication helped them in improving on their communication skills. The MOOCs platform helps them to swap opinions with other people especially with their peers which eventually helps them to acquire better communication skills. At the same time, collaborative learning happens when they get the
chance to read other people’s opinions and provide their own thoughts as well. Other than that, learners also believed that this particular MOOCs helps them in encouraging them to be more active and participative virtually also during face to face classroom session. ‘The mooc also encourages students to be active and participate more in using english...’ Based on a few responses from the learners, it is also believed that this MOOCs has helped them to practice more on their language learning and has provided them with the platform, also medium for them to practice on their English language. This particular findings have been on the same track with other findings from other researchers on the benefits of technology, especially MOOCs in helping learners to further improve on their communication skills. Banditvillai (2016), Yunus (2018), Hashim et al (2018) and Gunuc and Babacan (2017) have proven their stands based on their findings that MOOCs do help in English language learning especially in improving learners’ speaking abilities and acquisition.

**D. The features of MOOCs**

On another note, learners also provided their thoughts on the features of MOOCs that they believed have brought benefits to them as ESL learners. The learners mentioned that the idea of having MOOCs in general as part of a blended learning with their face to face classroom is very convenient as they can do the tasks assigned to them according to their free time and they did not encounter any time constraints issue. ‘..Besides, we can do the assignment on the mooc wherever while lepaking with friends because we can do it by using phone..’. Massive Open Online Courses or is widely known as MOOCs is indeed famous for its flexibility and convenience for the learners (Abeer & Miri, 2014). This has been proven by Cabrera and Fernandez Ferrer (2017) in their study which they have discovered and believed that students nowadays prefer technology as part of their learning as it is more handy for them to access the information using technology wherever and whenever they want during their leisure time. Besides from its flexibility and convenience, MOOCs has also been proven to help learners to act as a medium and platform of info sharing among the learners. The learners stated that MOOCs is a good platform for them to share infos and ideas among them and they also get to learn from each other.

**Conclusion and Implications**

The waves of open learning MOOCs all around the world has given learners from all over the globe to have their autonomy learning practiced and applied especially in language learning. It is very important for learners to be more autonomous in their learning and take charge of their own learning. As in the era 21st century learning, educators act only as guiders and facilitators that guide learners towards better learning. Educators, on the other hand should be fully equipped with the use of technology in today’s world as online learning and technology as a whole is the ‘It’ thing among younger generations. In today’s globalisation world, it is undeniably needed for a touch of technology in the process of teaching and learning and MOOCs have been undoubtedly proven to be one of the best touches for communication skills acquisition among younger generations.

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References


The Attitudes of Second Year EFL Students at Dr Moulay Tahar University towards Learning English Pronunciation through Mobile Assisted Language

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Abstract
Teaching and learning pronunciation has become a neglected issue because it is regarded as an abstract science, although it is a peripheral ingredient in English oral production. With the dawn of technology and its various tools, exploring pronunciation and its effectiveness in successful communication attracts a bunch of scholarly attention. The use of Computer Assisted Language Learning opens the gateway for the possibility to integrate other tools in language learning as mobiles and gives birth to mobile learning or free education. In this vein, the incentive behind the current research work is in twofold: to investigate the attitudes of both teachers and students towards the inclusion of mobiles in language learning, and to prove the effectiveness of this new approach in improving the listening and speaking skills of foreign language learners. To fulfill these aims, the researcher held an interview with 15 teachers teaching English at Dr Moulay Tahar University of Saida. The researcher also conducted a pretest and a posttest with 95 students of the second year from the same university. To this end, the findings revealed that both teachers and students have positive attitudes towards the introduction of mobile technology in language learning, even though some teachers still favor the traditional approaches of language teaching and learning. The results also demonstrated that the applications, used in the experiment, showed the usability of Mobile Assisted Language in learning English pronunciation.

Keywords: Attitudes, EFL Learners, English pronunciation, Mobile Assisted Language Learning

Cite as: GHOUNANE, N. (2019). The Attitudes of Second Year EFL Students at Dr Moulay Tahar University towards Learning English Pronunciation through Mobile Assisted Language. Arab World English Journal (AWEJ) Special Issue on CALL (5), 110 -123.
DOI: https://dx.doi.org/10.24093/awej/call5.9
Introduction
Technology has taken an eminent position in all areas of human lives. With the easy access to the different devices of technology including computing and mobile phones, people find it easy to exchange research and Information and Communication Technology (ICT) becomes an integral part in teaching and learning in the last few decades. The inclusion of smartphones and tablets in daily life has turned into a necessity that one cannot neglect or discuss the use of technology in education without shedding light on it as a fact. Indeed, the incorporation of mobile phones facilitates human communication, and improves their self-learning. According to Wang, Wiesemes & Gibbons (2012), “mobile phone learning (m-learning) simply as learning anywhere, anytime through mobile devices” (as cited in Ozer & Kılıç, 2018, p. 2916).

Students of nowadays display positive attitudes towards the use of mobile learning through storing lectures, downloading e-books, and applications that help them (Ozer & Kılıç, 2018). As far as foreign language learning is concerned, more recent studies indicate that language learners tend to employ mobile devices in learning a foreign language rather than computers. However, the amalgamation of m-learning needs to be guided by pedagogical instructions, so that both students and teachers can benefit from its use in class; therefore, this leads to the birth of an approach in language learning called Mobile Assisted Language Learning (MALL). In spite the fact that the use of MALL has gained an eminent position in language learning and teaching, and still regarded as self-directed learning because it provides a place for individuals to download journals, e-books, and develop the listening skills with videos from YouTube. (Ozer & Kılıç, 2018).

On the other side of the corner, searching on how to teach and learn English pronunciation has received the least attention, even though it is linked to listening and speaking skills. Nonetheless, teaching pronunciation as a field has witnessed a revival by some scholars who adhere pronunciation to proper English, i.e., “language learners need to have intelligible pronunciations to be able to express themselves more clearly in a variety of situations” (Lowenberg, 2002; Levis, 2005; McArthur, 2001; McKay, 2002; Seidlhofer, 2004; Widdowson, 2003, as cited in Saran, Seferoglu & Cagiltay, 2009, p. 98).

The teaching approaches to English pronunciation and students’ proficiency have raised several inquiries on how to improve their learning. Some researchers go to the point that students need to help themselves outside the class to develop their English pronunciation. With the dawn of technology and what has provided to the field of language teaching and learning, oral production has received more attention in comparison to the previous years. Thereby, the availability of ICT tools promotes a chance for English pronunciation, though research in the field is still new as it is put by Nunan (2005) (Saran, Sferoglu & Cagiltay, 2009).

The focal point behind the current research work is to give an in-depth look at the status of teaching English pronunciation in the Algerian context. It also intends to get a glimpse at the use of technology in general and mobile phones in particular in teaching and learning English pronunciation; henceforth, it endeavors to test the teachers’ and learners’ attitudes towards the introduction of Mobile Assisted Language Learning (MALL) in language teaching and learning. Lastly, the researcher attempts to test the effectiveness of some mobile applications on her
learners’ oral production. In this regard, the present research questions spring from the research objectives mentioned above:

- What are the attitudes of teachers and their students towards the use of MALL?
- What is the effectiveness of mobile phone applications on the learners’ oral production?

To find reliable answers for the previous research questions, the following research hypotheses stem from the research questions mentioned above:

- The attitudes of teachers may vary between positive and negative since the integration of MALL is still new, while students share positive attitudes.
- The use of some applications may show excellent results and increase students’ motivation.

There are tremendous constraints in the teaching and learning of pronunciation through MALL.

To scrutinize the research questions mentioned earlier, the researcher relied on quantitative and qualitative research tools in addition to previous scholarship, which is presented in the next title.

**Review of the Related Literature**

M-learning or mobile education has started replacing e-learning in the last few decades, although many researchers are still not familiar with this new approach. In the light of this tight, Brown (2003) observes that it is easy to make a differentiation between e-learning and traditional learning, but when it comes to m-learning, it is a little bit difficult to draw the distinction. Researchers like Georgiev, Smrikarove & Georgieva (2004) include m-learning in e-learning, i.e., it is a part of it since both of them depend on ICT tools in learning. On the other spectrum, some scholars like Turner (2012) highlight that e-learning is not m-learning, and we cannot apply the approach of the former to include the second in language teaching and learning. From this claim, one can argue that there is a discrepancy between traditional methods, e-learning, and m-learning.

Before giving an in-depth look at the difference between the two concepts and how one can approach learning or teaching through m-learning, it is crucial to provide an account of the term itself. Mobile learning has recently been inserted to education due to technological advancements in this field; however, defining the term diverges widely. Some scholars like Trifanova & Ronchetti (2006) elucidate that m-learning means the use of mobile devices anywhere and at any time whether the teacher directs it or it is self-learning.

The increasing nature of m-learning leads to the spring of a new learning approach called MALL, also known as “anywhere” approach which gives freedom for students to learn in class and at home through the use of mobile tools including smartphones, and tablets. Although there is a good intention towards the integration of m-learning in education, mainly in language teaching and learning, there are still some difficulties in selecting the best approaches (Traxler, 2007).

According to Chen (2008), mobile education has taken a particular position among learners because it has confirmed its usability in learning vocabulary, grammar, developing the reading skill, and pronunciation. Some studies have revealed that m-learning allows students to listen and record their speech, which in turn can help in improving their pronunciation (Wu & Chen, 2014;
as cited in Ozer & Kılıç, 2018, p. 2916). In the same line of thought, Kukulska-Hulme & Shield (2008) maintain that mobile devices can provide several practical activities in language learning that can be listed as follows:

- Recording lectures, videos, and activities that can introduce learners to the native speakers of the language,
- Enhancing their vocabulary building, and developing their pronunciation,
- Downloading teachers’ lectures in MP3 files,

As far as pronunciation and listening are concerned, the introduction of new mobile devices helps learners to download audio-dictionaries that aid them in developing their oral production, through learning phonetic transcription of different words. Besides, mobile devices can also help learners in developing their listening skill through listening activities (Chen, 2008). Although much has been found and written about the importance of mobile learning in raising students’ motivation because it is regarded as student-centered learning, it still lacks pedagogical instructions, mainly on how to integrate it in teaching and learning English pronunciation and listening.

According to Haggag (2018), there have been various studies that show the positive effects of mobile learning on teaching and learning English phonetics. These studies dealt with mobile devices as those conducted by Okunbor & Retta (2005), Fleischer (2012), Thomas & O’Bannon (2015) and others, while other studies explored the integration of some applications in teaching and learning phonetics such as those of Xiao & Luo (2015), Liu et al. (2014) and Alemi et al. (2012).

When it comes to the attitudes of EFL learners, some studies denote that language learners have developed positive attitudes towards the use of mobile devices in learning languages. Bese (2011) has conducted a survey through which he shows that students “responded positively to MALL”, while Sussex (2008) maintains that “students enjoyed being able to listen anywhere and at anytime; their research also suggested that learning became more student-centered and collaborate because students could communicate with peers whenever they needed help” (as cited in Ducate & Lomicka, 2013, p. 447).

**MALL and the Teaching of English Phonetics**

When it comes to the inclusion of MALL in pedagogy, several studies have been conducted on how to introduce it as an approach and the attitudes of both teachers and students. As has already been mentioned in the previous title, there are some contributions on how MALL has improved the learning of the four linguistic skills, mainly writing, listening, speaking, and reading. Researchers like Luo, Chen & Fang (2015), Miangah & Nezarat (2012) and others summarize the impact of inserting m-learning in English as a foreign language (EFL) classes as follows:

- It provides a suitable atmosphere for learning inside and outside the class,
- Students can have access to references at any time,
- Learners can acquire knowledge through videos that keep them in touch with the cultural components of the target language (Rozina et al., 2017).
Notwithstanding that there have been positive attitudes towards the integration of mobile learning in higher education, mainly in language learning, there are still a few challenges facing its use. According to Stockwell (2012), the usage of m-learning is still limited since the access to information on mobile phones is restricted because of the small size of the mobile screen which makes the learning tiring. Sharples (2009) highlights that researchers conduct several studies on the integration of MALL, mainly in language teaching. He also adds that there is an absence of scholarship on the use of mobile devices on the way EFL learners listen and speak (Ducate & Lomicka, 2013).

As far as the teaching of phonetics is concerned, researchers like Xiao & Luo (2015) find it useful to introduce mobile phones applications. They add that each area of phonetics needs a specific device or application. In their view, “Phonetics is an essential part of foreign language learning, with the help of mobile technologies, mobile learning has developed into a new mode of learning” (Xiao & Luo, 2015, p. 1, as cited in Haggag, 2018, p. 193).

Interests on the incorporation of mobile education in teaching English for EFL or English as a second language (ESL) classes attract a bunch of scholarly attention. Some researchers like Imam et al. (2014) tend to create an application to enhance English pronunciation, while other scholars attempt to develop applications that help foreign learners in learning English stress, although most of the scholarship was conducted on Computer Assisted Pronunciation.

Due to the lack of scholarship on the integration of MALL, one can claim that this field of research remains in its primary stage. What is challenging in its use is the lack of pedagogical instructions that can help learners on the one hand and providing activities and quizzes instead of depending on CALL activities on the other hand. This research seems challenging because the previous scholarship focuses on studying attitudes instead of the impact of mobile devices on the students’ language proficiency and development. When it comes to pronunciation, there is an absence of scholarship on how the anywhere and anytime approach can improve the speaking and listening skills of EFL learners.

Research Methodology and Design
The current research work relies mostly on quantitative and qualititative research tools for data collection. The researcher depended on an interview to test the teachers’ attitudes towards the use of MALL to teach EFL classes. To support her findings, she also conducted a pretest and a posttest with two groups of students belonging to the second year license level during the sessions of phonetics in the first and second semesters.

During the experiment, the researcher encouraged her students to download applications for phonetic transcription. She also heartened them to employ websites during the lectures, in addition to the use of digital recordings to check their pronunciation in terms of sound pronunciation and stress placement.
Sampling
The researcher selected the sample from Dr Moulay Tahar University of Saida, Algeria during the academic year 2018/2019. As a teacher and a researcher in the area of English pronunciation, the researcher aimed to introduce new approaches that go hand in hand with the development in the field of technology and depending on her students’ needs. The researcher conducted several tests on the students’ level of oral performance and motivation towards the field of phonetics. What also encouraged the researcher’s to choose the topic is her students’ motivation towards mobile applications to test their pronunciation. Hence, the sample was 95 students from the second year for the pretest and posttest, while the researcher held an interview with 15 teachers from the department of English language and literature at Dr Moulay Tahar University.

Data Collection and Analysis
Data collection took about six months because the researcher employed different research tools and based on her observation on sound pronunciation and stress placement. Some of these features are dealt with during the second year, for this reason, the researcher had to give her students lectures on these features before the experiment.

Mobile-Based Phonetic Tests

English Sounds Test
During the first semester, the students had a general revision on English sounds and their articulation in addition to syllables. The researcher focused on testing her students’ articulation of some English sounds that they found them difficult during their first year including /ʌ, T, ʃZ, ʃ, Z, ə, ʌ, ɛ, ɒ, ʌY/. Students were required to record their pronunciation of English sounds and then listen and detect their errors. Later on, they were asked to download and employ a free application entitled “Sounds: The Pronunciation App”. The application consists of a sound chart that helps them in getting the exact pronunciation of English sounds. The students were asked to listen and repeat the sounds according to RP pronunciation. The researcher found that 70.52% of students have corrected their pronunciation of these sounds.

The pronunciation application also contains activities based on reading, listening, and writing. As far as reading is concerned, the students were given 15 transcribed words in the app to find out their written forms as it is shown in table 1:

Table 1. Students’ responses in the selected words from the application (reading test)

<table>
<thead>
<tr>
<th>Transcribed words</th>
<th>Written forms</th>
<th>Students’ answers in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ʌ/</td>
<td>Announcement</td>
<td>87.36%</td>
</tr>
<tr>
<td>/ɔː/</td>
<td>Foreign</td>
<td>95.78%</td>
</tr>
<tr>
<td>/ɪ/</td>
<td>Mirror</td>
<td>81.05%</td>
</tr>
<tr>
<td>/ə/</td>
<td>Knee</td>
<td>100%</td>
</tr>
<tr>
<td>/ʌ/</td>
<td>Original</td>
<td>85.26%</td>
</tr>
<tr>
<td>/ɔː/</td>
<td>Iron</td>
<td>95.78%</td>
</tr>
<tr>
<td>/θ/</td>
<td>Anchor</td>
<td>58.94%</td>
</tr>
<tr>
<td>/θ/</td>
<td>Collaborator</td>
<td>74.73%</td>
</tr>
</tbody>
</table>
Throughout this activity, students were asked to read the transcribed forms of these words, and then write to check their correction. They found it interesting and were more motivated in comparison to other groups who were just given words to transcribe, or they were provided by the transcribed forms and did the opposite. According to table 1, the students found difficulties in reading the transcribed types of some words including ‘towpath’ with 53.68%, unquenchable with 50.52%, anchor with 58.94% and ‘honeycomb’ with 56.84%.

The findings also revealed that this application raised the students’ attention towards some mistakes that they were making regarding some sounds like /ɪ/ and /ɛɪ/ in words including ‘anchor and unquenchable’ or vowels like /ɪ/ and /ʌ/ in words such as ‘courtly and foreign’.

Throughout the same application “Sounds: The Pronunciation App”, the researcher asked her students to transcribe the words which were found in it. They were given a list of words with a table of phonetic symbols and were told to write the transcription of these words and check them later on. The two groups were also given 15 words for their test:

Table 2. Students’ responses in the written test from the application (writing test)

<table>
<thead>
<tr>
<th>Words in letters</th>
<th>Their transcribed forms</th>
<th>Students’ answers in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
<td>/ɒɪː/ɪŋθɪŋ/ɪŋθ/</td>
<td>64.21%</td>
</tr>
<tr>
<td>Carpenter</td>
<td>/kɑːɪəŋθ/ɪŋθ/</td>
<td>91.57%</td>
</tr>
<tr>
<td>Coordinator</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>75.78%</td>
</tr>
<tr>
<td>Prepackaged</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>93.68%</td>
</tr>
<tr>
<td>Treasure</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>96.84%</td>
</tr>
<tr>
<td>Opportunism</td>
<td>/ɒɪː/ɪŋθ/ɪŋθ/</td>
<td>66.31%</td>
</tr>
<tr>
<td>Soapflak</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>94.73%</td>
</tr>
<tr>
<td>Woebegone</td>
<td>/wɒɪː/ɪŋθ/</td>
<td>51.57%</td>
</tr>
<tr>
<td>Viaduct</td>
<td>/wɒɪː/ɪŋθ/</td>
<td>76.84%</td>
</tr>
<tr>
<td>Racecourse</td>
<td>/wɑːɪŋθ/ɪŋθ/</td>
<td>92.63%</td>
</tr>
<tr>
<td>Macabre</td>
<td>/wɑːɪŋθ/ɪŋθ/</td>
<td>85.26%</td>
</tr>
<tr>
<td>Giant</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>69.47%</td>
</tr>
<tr>
<td>Nuanced</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>52.63%</td>
</tr>
<tr>
<td>Bauxite</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>62.10%</td>
</tr>
<tr>
<td>Auctioneer</td>
<td>/θɪŋθ/ɪŋθ/</td>
<td>50.52%</td>
</tr>
</tbody>
</table>
In this activity, the students were asked to write the phonetic transcription of the above words which are found in the application. About 93.68% of them shared positive attitudes towards this activity. They justified their answers claiming that it supplies them with a keyboard of sound symbols and correction after they finish the activity. They also stated that they enjoy the application because they read and listen to the listed words. In contrast, 6.31% of the learners maintained that it is tiring because of the small screen of their mobile phones in addition to the lack of network.

According to the results mentioned in table 2, students still have a problem in the use of /ɑ/ sound. They also have a constraint in distinguishing /ɛɪ/ and /ɜ/. The use of diphthongs mainly /ɛɪ/, /ɑɪ/, /eɪ-/Y/ and /ɑY/, i.e., they still find it difficult in putting these vowels. They justified their answers claiming that it is due to the lack of practice in their first year because they found it annoying to check words and practice them using a pocket dictionary.

The application also consists of a quiz tester based on the reading, writing and listening that the researcher asked her students to practice it at home to encourage their self-directed learning and test their attitudes towards anywhere and anytime approach. It was found that 95.78% of the students did the activity because she asked them to write the answer to the quiz tester.

**Stress Placement Test**

The unit of stress placement in simple, complex, and compound words is introduced during the first semester of the second year. Through a classroom evaluation, the researcher discovered that 64.21% of the selected students for the experiment found it challenging to put stress, although they were provided with rules for stress placement, while 83.15 % of them did not know how to place the secondary stress, in spite the fact that the researcher supplied them with activities for both class and home.

After testing the students’ attitudes towards the mobile application for English sounds, and its impact on their feedback, the researcher decided to continue the experiment focusing on the students’ acquisition and understanding of the stress rules through a free application entitled “Stress Training App” which contains 30 levels. To test her students’ level, she started with the first one, which consists of four words. The researcher found that 90.52% of her students knew where they could place stress for the words that are listed in table 3; for this reason, she moved to other levels.

<table>
<thead>
<tr>
<th>Words for the test</th>
<th>Stress placement</th>
<th>Students’ answers in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confident</td>
<td>/ɔkœɪndɛvɛnt/</td>
<td>89.47%</td>
</tr>
<tr>
<td>Speculate</td>
<td>/sپɛɛkφιɛlt/</td>
<td>52.63%</td>
</tr>
<tr>
<td>Difficulty</td>
<td>/dɪfɪkλɪt/</td>
<td>64.21%</td>
</tr>
<tr>
<td>Correctly</td>
<td>/kɛɛrɛktɛlt/</td>
<td>92.63%</td>
</tr>
</tbody>
</table>

The application is based on listening to identify stress placement. The students were asked to listen to the word, detect the stress placement, transcribe the word on board and provide the rule, i.e., the
teacher combined the MALL approach with the traditional one based on developing the learners’ listening skill. The activity raised their motivation, unlike the conventional method that made them bored from practicing and checking out the rules in the handout. According to table 3, most of the learners’ answers were more than 50%. The results also exhibited that students dealt with primary stress in simple words on the first level. What also characterizes the application is that the learner cannot move to the following level without getting at least one star in the first one.

In the second level, the learners were exposed to activity in placing both primary and secondary stress. Through evaluating her students’ background in placing secondary stress, she found that 83.15% of them did not know how and when they have to put secondary stress. The second level of the application also gave four words for practice, and the students had to get at least one star so that they can move to the third level. Based on listening, the learners placed secondary stress for the selected words as it is shown in table 4:

Table 4. Students’ responses for secondary stress placement in the second level of the application

<table>
<thead>
<tr>
<th>Words in the second level</th>
<th>Secondary stress placement</th>
<th>Students’ answers in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration</td>
<td>/ækσpiʌ/</td>
<td>81.52%</td>
</tr>
<tr>
<td>Demonstration</td>
<td>/dɛmɪn/</td>
<td>83.15%</td>
</tr>
<tr>
<td>Speculation</td>
<td>/sɛkϕι/</td>
<td>85.26%</td>
</tr>
<tr>
<td>Fundamental</td>
<td>/fθiν/</td>
<td>88.42%</td>
</tr>
</tbody>
</table>

Although hinging on four words is not enough to test the students’ level in placing secondary stress, the experiment had encouraged them to search for other applications and conduct extra activities at home. Depending on listening, the students were able to put both primary and secondary stress in the above examples as the findings show. More than 80% of the students succeeded in this activity and moved to the third level, howbeit they had some difficulties in transcribing words of more than three syllables.

Mobile-Based Reading and Listening Test
The researcher insisted on merging listening, and reading in learning English pronunciation. Through reading, the students can attend and evaluate their speech depending on their mobile recording. The researcher relied on the selection of the materials on a mobile application entitled “BBC English Listening App”, which consists of BBC current world news with some short stories. The students had to select a passage from BBC news. They started reading these passages and recording their speech as the first pretest. Later on, they had to listen to native speakers reading the passages. They also had to detect stress placement. They selected listening to “BBC news 02 & 03 with Rosemary Crick & Fiona MacDonald” and “The Story of Sherlock Holmes: The Yellow Face” to be familiar with RP. They were asked to choose the words that they used to pronounce incorrectly. After that, they picked up passages for reading and registering randomly depending on the choice of the teacher. Students were also required to listen and read carefully the chosen passages and correct their wrong pronunciation before recording for the posttest.
As table 5 divulges, there is a significant distinction between the pretest’ and posttest’s results. In the pretest, students started reading and recording without listening to the application. They just began with a first reading before recording to have an idea about the texts. As it is found in the test, students perceived difficulties in pronouncing certain words, and sounds such as correspondent, chaotic, pedestrianized, missile, inconsistent, negotiators, circumstances and reproachfully…etc. While in the posttest, the pronunciation background had improved with 72.63% because they based their reading on listening to native speakers through the application.

As far as stress placement is concerned, the researcher wanted to raise the students’ attention towards the issue of time constraints in studying how to place stress in both words and sentences, while the focus of the syllabus is to consider stress placement in words. Therefore, the researcher tried to give more time for stress placement in sentences even though learning phonetics for one session per week is not enough; for this reason, the results were not good during the pretest with a score of 45.26%.

As far as intonation is concerned, the results showed a significant difference between the students’ level in the pretest and posttest. Depending on just theoretical lectures without integrating the listening, reading, and writing students cannot develop a background and language proficiency. As such, the researcher aimed to incorporate mobile applications that take into account all the skills in learning English pronunciation, even though it seemed difficult due to the lack of scholarship.

**Teachers’ Interview**
The sample for the interview was chosen from the department of English language and literature at Dr Moulay Tahar University of Saida, Algeria. The researchers picked out 15 teachers who had experience in teaching English pronunciation through modules of oral expression and phonetics. The interview took two months since most of the teachers are not living in Saida, they are from other towns; for this reason, getting in touch with them is a little bit difficult. The researcher conducted a focus group interview due to this reason. She interviewed teachers in three meetings for 50 minutes.

The interview consisted of six questions that addressed the attitudes and motivation of the selected teachers towards the incorporation of m-learning in their lectures. The findings proved that most of the teachers (86.66%) supported the inclusion of technology in education. They highlighted that technology should be boosted by pedagogical instructions that help both teachers and learners, but when it comes to mobile use in learning, 40 % of them disagreed and related that to time constraints and overloaded syllabi. They added that they have not enough time to include it in class, while 60 % of them maintained that they are trying to integrate m-learning mainly in grammar and oral expression based on the learners’ listening and speaking skills.
The researcher explained the motivation of the students towards the use of mobile phones in class and home. She maintained that her students tend to download the e-books that she sent them on their mobiles instead of their computers. She also justified their negative attitudes towards bringing pocket dictionaries for the session of phonetics and how they prefer to check the transcription of words in their mobiles through downloading e-dictionaries. For this reason, she searched for an e-dictionary that can be used by her students. Throughout the following questions, the researcher tested the teachers’ motivation and attitudes towards the inclusion of mobile education in their classes:

- **Do you allow your students to use mobile phones to learn in class?**
  73.33% of the teachers replied on this question stating that they are allowing their students to use their e-dictionaries. They added that some learners are downloading applications for grammar rules that they depend on them whenever they need to check out. They also highlighted that some of the students prefer to write teachers’ notes of the lectures in their mobiles to search for more information at home. 60% of the teachers added that some of their students do not even take notes from the PowerPoint presentations or the board, but they instead prefer to take photos by their mobiles. They maintained that they could not prevent their students, and to introduce an approach to use it in class is a little bit difficult because m-learning is still in its infancy to be integrated into classes.

- **Do you guide your students in using mobile language applications?**
  86.66% of the interviewees argued that they guide their students in selecting the appropriate applications for more research at home, not in class. In their parts, two grammar teachers claimed that they encouraged their students to download some free grammar applications that contain rules to be used in class and activities at home like “English Grammar in Use with Test App”. Similarly, three teachers of oral expression maintained that this module is based on developing the listening and speaking skills of the learner; for this reason, they searched for technology tools to help their students. They added that they started encouraging them to build their skills through downloading programs in their computers and mobile phones. They maintained that since the learners are more motivated for m-learning, they guide them in selecting the appropriate applications according to their needs and attitudes because it is regarded as self-directed learning in their point of view.

- **Do you think that there is a possibility to introduce it officially in the Algerian context?**
  70% of the teachers maintained that if we suppose that Algerian universities go hand in hand with world development in technology and the integration of new tools in the field of teaching and learning, Algerian experts have to create new teaching curricula and materials that fit the use of mobile learning. They added that its integration depends on the availability of mobile phones and the net, and claimed that not all students have smartphones or tablets or access to the net. They further highlighted that most good language applications are not for free; for this reason, their use is restricted. Furthermore, 30% of the interviewees commented that if it is integrated into higher education, they will find it challenging to switch from the traditional method that they used to follow as students and then as teachers. They further claimed that the use of mobile learning is not always positive because it has become a source for different types of academic misconduct, mainly plagiarism and e-cheating.
Recommendations
Although most of the teachers’ attitudes vary between negative and positive towards the integration of MALL in language teaching and learning due to the reasons mentioned earlier, this cannot be generalized for all EFL teachers in the Algerian context. Another critical point is that teachers can welcome MALL if the following points are taken into account:

- The teaching of English pronunciation can be motivated by the incorporation of new teaching approaches and technological tools.
- Teachers should encourage and guide students to use technology in the right way.
- Teachers should cope with the latest changes in the fields of technology and education.
- Teachers should take into consideration their students’ attitudes in teaching.
- MALL can be introduced to classrooms if teachers are trained on how to employ the new approach.
- Teachers should guide their students in selecting the appropriate applications according to their needs.
- Teachers can benefit from the students’ attitudes towards mobile devices, i.e., combining the formal with the informal settings of learning.
- Teachers can direct their learners’ attitudes and put them in the right path, i.e., guiding them to download activities that develop their four linguistic skills.
- Teachers can mix both approaches, that is, the traditional one and MALL in class to avoid relying on CALL and printed copies.

Research Limitations
Although the results of the study were overwhelming, there had been some obstacles that hampered the researcher mainly time constraints, a long syllabus, lack of scholarship concerning MALL and its implementation in the teaching and learning of English pronunciation. Besides, not all students have smartphones and access to the net. Another important point is that two groups from the second year license level who only conducted the survey, and the researcher cannot generalize that on the teaching of English phonetics in all Algerian universities, or for the teaching of English in general. These findings can provide a point of departure for more scholarship on how to move from traditional approaches that link both the student and the teacher to time management and handouts into the world of technology.

Conclusion
The present research under scrutiny was an endeavor by a researcher to cope with developments in the fields of technology and language teaching and learning. Indeed, the researcher attempted to test the attitudes of both learners and teachers towards the inclusion of m-learning in higher education in the Algerian context through an experiment conducted in teaching English pronunciation, which is dismissed from scholarship in the Algerian context. The current study also aimed to provide a glimpse on the effectiveness of m-learning not only in guiding the learners to acquire new vocabulary or develop their listening skill, but it was a road that bridges the gap between all skills through combining the reading, listening, and writing skills.

The findings displayed that the integration of Mobile Assisted Language Learning is welcomed by students, while teachers see that time constraint, old traditional, and overloaded
syllabi are stumbling blocks in its successful incorporation, in addition to the lack of scholarship on how to introduce MALL and train teachers. On the students’ part, the results showed that they enjoyed the experiment claiming that mobile phones keep them closer to any progress in the field of language teaching and learning at anyplace and anytime. The results also revealed that the students rely primarily on their teachers’ instructions in choosing the appropriate applications depending on their needs, and the field of research, i.e., it is not only a learner-oriented approach because the student is always in need of his/her teachers’ guidance in selecting the appropriate application.

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Efficiency of an Educational Robotic Computer-mediated Training Program for Developing Students’ Creative Thinking Skills: An Experimental Study

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Abstract
This research aimed at detecting the efficiency of a computerized training program based on programming the educational roboticists to develop creative thinking skills for the eighth grade basic education students at Manba'a El-Hekma School in Dhofar Governorate. Also, it investigates the nature of the proposed program, the efficiency of the program, and the significance differences between the two groups. The researcher used the experimental curriculum with the two groups; controlled and experimental to achieve the aims of the research and to test its hypotheses. The sample of the research consisted of 30 Students during the first term of the school year 2018/2019 and they were selected intentionally. Each group included 15 students. The experimental group students were trained to program the educational robotics using the computerized training program. Torrance test of creative thinking was applied before and after on the two groups, in addition to an evaluation card to the projects of the Students. The results showed that there are differences with statistical indication on the level of 0.5 between the two averages of the degrees of the experimental and the controlled groups, before and after the application of the creative thinking test and in the evaluation card of the Students' projects in the experimental group. By implication the research recommended to merge the techniques of the educational robotics and the artificial intelligence in teaching and education and training for provide the female teachers on using that technology and encouraging them to employ it in the process of teaching, using the electronic program prepared in this study.

keywords: Computer-mediated Training Program, Creative Thinking Skills, Educational Robotic

Cite as: Soliman, S. A. (2019). Efficiency of an Educational Robotic Computer-mediated Training Program for Developing Students’ Creative Thinking Skills: An Experimental Study. Arab World English Journal (AWEJ) Special Issue on CALL (5).124-140. DOI: https://dx.doi.org/10.24093/awej/call5.10
1.1 Introduction
The interest in developing the educational systems is considered the starting point for the progress of countries in different fields. There is doubt that the revolution of information and technology, the multiplicity of knowledge channel, the great increase in population and the need to find distinguished qualified specialists led to a change in the concept of knowledge in general and called for the necessity of concerning about inserting the technology in the process of education and using it to improve the operations of education and learning. Many technological innovations related to the field of education appeared, among of which is the artificial intelligence represented in the modern programmable technological equipment’s which are called: Educational Robotics.

Robotics is considered one of the developments in the field of artificial intelligence technology that achieved a wide spread in the educational media in the world. The teachers noticed how the robotics could achieve in education by broadcasting energy in the students' souls and by making the classroom an educational environment characterized by a high level of interaction, in addition to working as members in one team and developing their thinking skills by learning depending on solving problems. (El-Khaledy, 2011).

There are several studies performed in the field of educational robotics that insured its importance as a technological educational tool as mentioned in Eguchi's study (Eguchi, 2014). Those studies aimed at displaying the importance of merging the educational robotics to be a technological educational tool in the curricula of the general education, how they could help the students to get prepared for the future as mentioned in Pazstor et al (Pazstor, Pap-Szigeti & Torok, 2010). The last study aimed at checking the efficiency of using the robotics as a model for teaching programming based on the educational constructional methods instead of the behavioral ones. The results of those studies proved that using robotics contributed in developing the motives of learning and in the formation of positive tendencies for learning. Cooper's et al (Cooper, Keating, Harwin & Dautenhahn, 2000) study reflected the views focused on the benefits of robotics in schools and universities for the students for what they possess of great educational possibilities on all levels.

Sultanate of Oman seeks for investing those skills and mental abilities for the learners in all the stages by forming educational programs that develop those skills and mental abilities. Among those abilities are the skills of creative thinking as the development that appeared in the last two decades in the field of education insured the concentration on the learner to learn by himself through the activities, experimenting, researches and questionnaire. The interest was directed to the necessity of providing new curricula and styles in education that achieves the ability of self-learning and working among a team by the learner to get the objectives drawn by the students themselves with the assistance of the teacher.

Through this, the current study seeks for concentrating on the robotics programs that can contribute in developing the abilities and skills of creative thinking for the students in the basic eighth grade. Training the students on modern technology, specially the field of programming robotics and studying its efficiency on their creative and scientific skills, are considered a method to be pursued in developing the school subjects in the educational process on the Sultanate of Oman.
1.2 The problem of the research
For keeping up with the developments with the age, teachers and learners need to train the necessary skills to get in the modern fields of technology in the which computer became a basic pillar and an important key of which. Many previous studies such as Abd El-Galil (2013), Hemdan (2012) and Chang (2009) confirmed that the students' need to train on the skills of educational robotics and the importance of increasing the training opportunities in this field, teaching the robotics became one of the necessary requirements to build minds which are able to catch the track of the developed countries, schools have to keep up and encourage using technology in education and to be concerned to enter motivating and encouraging educational styles in developing the skills of creative thinking for the students.

The researcher performed a survey by distributing a questionnaire for (20) twenty female teachers of information technology in the schools of Dhofar Governorate to know the obstacles that confront the Students in programming the robotics. A percentage of 60% of female teachers indicated that the Students could not program the educational robotics. A percentage of 80% indicated that the educational robotics are not available to include all the students when all the female teachers confirmed that the Students wanted to train to program robotics because that would strengthen their positive learning motives and to increase their achievements in the field of education.

The problem of the research is summarized in the following questions:
1-What is the computerized training program based on programming the educational robotics in developing the skills of creative thinking for the Students in the basic eighth grade?
2-What is the efficiency of computerized training program based on programming the educational robotics in developing the skills of creative thinking for the Students in the basic eighth grade?
3-What is the efficiency of computerized training program based on programming the educational robotics in producing creative projects based on programming the robotics for the Students in the basic eighth grade?

1.3 Hypotheses
1-There are differences with statistical indication on the level of (0.05) between the two averages of degrees, of the Students in the experimental group and the degrees of the Students in the controlled group in the test of creative thinking, for the benefit of the experimental group.
2-There are differences with statistical indication on the level of (0.05) between the two averages of degrees of the Students in the experimental group and the degrees of the Students in the controlled group in the evaluation card of the product of the creative projects which are based on programming the robotics, for the benefit of the experimental group.

1.4 The objectives
The research aimed at the following:
1-Designing a computerized training program based on programming the educational robotics to develop the creative thinking for the Students in the eighth grade of basic education.
2-Knowing the extent of efficiency of applying the computerized training program in developing the ability of creative thinking for the Students in the eighth grade of basic education.

3-Discovering the efficiency of the computerized training program based on programming the educational robotics producing creative projects based on programming the robotics for the Students in the eighth grade of basic education.

1.5 Significance
The importance of the research is represented in the following:
1. Directing the sight of those who teach information technology to the importance of using the computerized training programs in developing the skills of creative thinking for the students.
2. Presenting a computerized training program supplied with all the multimedia that benefit the specialist in information technology by employing him/her in training the students to install and program the educational robotics.
3. The card of evaluating the product used in this research to measure the skills of the students in other school grades concerned with producing creative projects based on programming the robotics.
4. The importance of the research is based on the importance of robotics because of the variety of its jobs in the current era, its applications prevailed in the different fields of life in general. That requires condensing the scientific and technological tracks to keep up with all the innovations in this field.

1.6 Research limits
1-A sample of the Students in the basic eighth grade in Manba'a El-Hekma School, Dhofar Governorate.
2-The second unit concerning the Robotics in the Information Technology in the basic eighth grade for the school year 2018/2019.
3-The skills of creative thinking skills of fluency, flexibility and originality from which the researcher aim at studying the extent of providing those factors in the works of the Students of the experimental group after having the computerized training program
4-The school term of 2018/2019.

1.7 Research Items
The computerized training program:
The computerized training program is considered a plan for a number of educational situations and aspects of organized activity intentionally to achieve an aim or a group of aims, in addition to considering that the content of any educational objective is to create an intended change in the cognitive, skilled or emotional aspects for a group of individuals. The program includes all the integrated educational experience done by the learner whether with or without the teacher through a period or a certain educational stage. (Abd El-Aaty, 2001).

The program is identified by the researchers as: The bold lines for a group of educational lessons of installing and programming the robotics for the Students in the basic eighth grade in in Manba'a El-Hekma School, Dhofar Governorate under the educational objectives of the skills of
programming the robotics. Those objectives are characterized with comprehension and integration and using the training educational methods supported with technology of multimedia with the variety of educational activities. in Manba'a El-Hekma School, Dhofar Governorate.

The educational Robotics:
It is procedurally identified as a group of pieces of installation and connecting, motors, sensors and assistant software produced from Lego Company (EV3 Education) that will be taught in the curriculum of information technology for the basic eighth grade in the schools of basic education in Dhofar Governorate.

Creative Thinking:
Yassin (2008) identified "Creativity" as: The mental, spiritual, impulsive and social processes that lead to the solutions, ideas, technical form and theories or the new products''.
It is procedurally identified as "the ability of the Students, in the eighth basic grade in Manba'a El-Hekma School for basic education in Dhofar Governorate, to know the importance of the robotics in confronting the situations and to solve problems in a nonesuch method.

2. Literature Review
The theoretical framework deals with the educational robotics and the importance of its usage in education in addition to the creative thinking concerning its related concepts and skills.

2.1 The educational Robotics
Robotics is considered one of the most important developments in the field of artificial intelligence, that achieved a wide spread in the educational media in the world. Educational robotics provides unlimited capacities. Teachers noticed how the computer and its attachments like the robotics in education lead to broadcasting the energy in the students' souls and to make the classroom an educational environment characterized with a high level of interaction and to contribute in developing their skills of thinking by learning depending on solving problems (El-Khaledy, 2011).

2.1.1 Identifying the science of Robotics
Concerning the definition of Robotics Institute of America in 1979, it is "A programmable manipulator and multi-tasks tool, it is designed for transferring materials, spare parts, tools and specialized equipment’s through a group of programmed movements to perform a variable group of tasks" (Garwan, 2014, p. 150).

The Japanese Union of Industrial Robotics based a definition of robotics which provides that: "It is a machine for all purposes provided with a Memory Device and limbs which are able to rotate and to replace the human factor by automatic performance of motions" (Abd El-Wahed 1996, p. 102).

Ghonemii (2001) adds a definition of the Association of Robotics Industries that identified the robotics as: "It is an automated mediator that can be re-programmed, it is a device with multiple functions and can be used in moving subjects or to perform other specialized works."
2.1.2 The practical applications of robotics
Robotics is used in different fields like entertainment, heavy industries, scientific discoveries and medicine for what it is characterized with of the ability to perform hard and dangerous tasks, which are boring for the human, with a high degree of accuracy and noticed speed. The design and shape of robotics are various according to the purpose for which it was designed.

Wajner & Compton (2016) says that education based on creativity is the one which leads the students to find and follow the motive of cognitive discovering which develops by time, to create more depth and feeling of objective. That can Generates motivation and passion for learning. To achieve the ambition of creativity in education, there have to new methods such as the skills of robotics and the skills of the twenty-first century such as skills of communication, planning, and teamwork. Teaching robotics for the students can stimulate them for scientific research, creativity, and invention. (Robotics Arabic Magazine, 2015, p. 39).

2.1.3 The importance of using robotics in education
Robotics is considered one of the modern fields that spread in the educational media. Robotics science provides the encouraging environment which is based on self-learning, handwork and merging sciences and learning with experiment, and to present the creative solutions for problem. So, teaching the robotics and including it in the students' curricula became one of the priorities of the modern school which keep up with technology and encourage for it, the schools which are keen to insert methods and motivating methods of education for the students (Garwan, 2014).

Therefore, using the robotics in the educational process has many benefits and characteristics (Yassin, 2008, p. 217), some of which are encouraging for cooperative learning and working among a team, motivating the skills of handwork and developing it, developing the skills of thinking (creative and critical) and promoting the skills of solving problems, to achieve the integration between sciences, to train the students to organize and manage time. To connect learning with the practical life, to achieve the concept of interesting learning and to train the students on invention and creativity.

2.2 Creative Thinking
Al-Jaji (2011) mentions that educational and psychiatric studies in the field of creation and creative thinking are among the most important achievements in education. He identified creativity as the production which is distinguished with the biggest extent of intellectual fluency, flexibility, spontaneity, originality and far-reaching implications as a response for a problem or an exciting situation.

Hanora (1997, p. 54) also defines creativity as a production for something new for the individual, the society or the culture. That creative production is characterized with rarity, relevance and support. That means the parts of the solution of the result are completely correct and the individual is able to create forms of new shapes rather than improving and developing that he\'s she performs for the previous forms and shapes.
2.2.1 The concept of Creative Thinking
El-Dreny (1991, p. 24), El-Laqani and El- Gaml (1996, p. 60) agree that the inventor is distinguished with a group of characteristics represented in the spontaneous behavior, originality in production, flexibility in response, curiosity with open thinking, feeling with freedom that carries risk and independence in thinking. They pointed out that Torrance defined creative thinking as an operation in which the individual became sensitive to problems and aspects of lack of the experiences of knowledge, deficient principles and lack of harmony and so on. So, he/she identifies the difficulty, searches for solutions, introduce suggestions and formulates hypotheses for the contradictions, examine and re-examine those hypotheses, prepare for them and re-examine them and finally presents his/her results concerning that matter.

Othman & Bakr (2002, p. 37) referred to that creative thinking helps the teachers to produce a great number of ideas which are represented in new and various choices or alternatives that enable them to solve the problem.

2.2.2 The components of the ability to creative thinking
This kind of thinking includes three abilities on which the researcher agreed on. They are fluency, flexibility and originality and that was confirmed by KairAllah (1990, p. 47). Each component of them is identified in the following:

Fluency:
Eisa (1993) defines Fluency as: "The ability to produce the biggest possible number of alternative ideas and responses from the stored information in the memory" (p. 22), of symbols, shapes, and words which are represented in some special conditions through a certain period of time. The sub-factors of fluency are represented in the following:

![Figure 1. shows the sub-factors of fluency (El-Zayat, 1995)](image_url)

Flexibility:
Kenany (2000, p. 99) believes that flexibility is the thing by which an individual can change his mental situation and change his thinking direction through which he can see various things and situations. Soliman, Abu-Hatab (1998,) referred that Torrance identifies the students with flexibility as those when plans or methods of whom fail, they come quickly with a different entrance and they use several plans or different entrances to solve the problem. So, flexibility is the ability to produce suitable responses for a certain problem or an exciting situation, it is
distinguished with diversity and non-stereotyping, as much as the increase in the unique response, as much the flexibility increases.

\[\text{Figure 2. shows the sub-factors of flexibility}\]

**Originality:**
KairAllah (1990) referred that Torrance identifies the students with originality as "Those who can get away from the familiar and common things, who have the ability to realize the relationships between things, who can think about ideas and different solutions from what others can think about. Originality is the ability to produce original responses, which are repeated a few in the group to which the individual belongs. As few the thought is, the bigger the degree of its originality is (p. 43).

**2.2.4 The stages of creative thinking**
Abd El-Salam (2000) and Ahmed (2000) agreed that the process of creativity passes four consequent stages:

- Preparation Stage: This stage represents the stage of preparatory phase for creativity, through which information concerning the problem is collected, understood and represented, the relationships between then and its related articles of the problem are analyzed to elements to search for the possibility of employing the available information for solving it.
- Incubation Stage: This stage represents the incubation of thoughts, information related to the problem when the individual leaves the problem for a period may be long or short, and surprisingly the solution appears. That is called the unexpected solution. This stage requires the serious intellectual work which includes examining and organizing the ideas, information and experiences. Here, a kind of sentimental predisposition happens as a result of decreasing pressure on the short-term memory. This stage is sometimes called preparing information.
- Illumination stage: This stage represents reaching the peak of the creative process. It is sometimes called the creative insistence or the stage of enlightenment. Information and experiences seem as if they were spontaneously organized without planning. Everything was ambiguous or unclear becomes obvious. In this stage, a lot of interferences, that hinder the individuals' progress for solution, vanish. So, ideas converge and the solution jumps to the individuals' realization and awareness. Researchers find that the stage of inspiration is similar to the process of wasted searching for a forgotten name, and after a period of neglecting, it rises surprisingly to the mind.
- Verification Stage: This stage represents special importance in the creative process as it is related to the judgment of the correct result and its being sound by performing some experimental tests.
for the thoughts and new responses under the test of reality. This stage is considered the experimental application of the results of the precognitive stage.

2.3 The previous studies:
Many studies confirmed that changing the methods of teaching using new methods can lead to developing the creative thinking and increasing the academic achievement, among the used methods in this research is the electronic training program based on programming the robotics from the new methods confirmed by a lot of studies and researches. Through teaching by those methods, there is an interaction between Students and they perform their work efficiently. That was proved by many researches.

Eguchi's study (2014) shows the importance of merging the educational robotics to be a technological, educational tool in the academic curricula in general learning, at explaining the methods of helping the students to prepare for the future by applying STEM orientation. The study reached that merging the programs and projects which uses STEM through teaching robotics in education to develop the mathematical thinking and in learning the geometric skills, symbolization and all the necessary knowledge and skills for the students to become successful staff of workforce in the future. Also, the study proved that educational robotics are considered the tools of the technological education — all in one — they encourage the students for success in the future. The research recommended that academic curricula should teach robotics integrally at schools.

The study of Pazstor, Pap-Szigeti and Torok (2010) aimed at verifying the efficiency of using robotics as a model of teaching programming based on the constructional educational styles instead of the behavioral ones. The study applied the experimental curriculum on a group of the students in the Faculty of Programming. On comparing the results of the experimental group and the control group, the results showed that using robotics contributed in developing the motives of education and in formulating of positive attitudes that influence more achievements in programming.

Goh & Aris's (2007) study confirms at describing its lessons, concerning the design of robotics in education that appeared through the students' experiments in building and programming robotics, and in noticing some considerations that contribute in designing efficient robotics for the student. It was also noticed how the design of robotics can be interesting, funny, activating and motivating. A group of conclusions were reached by notices and interviews with six of the participating students. The researcher reached a group of results, the most important of which is the necessity of joining the students to build robotics which copy real problems. So, the students should directly confront and practice the reality, however immediate feedback of the success or failure of their thought, should be provided immediately from the students who are distinguished with high individual experiences and capacities. Those students should be distributed on the work groups to benefit from their experience and to exchange the ideas among the teams of work. They should give more space to express their thoughts. At the end, the students should reach a correspondence for the whole team. The study also proved that robotics is an excellent tool for teaching science and geometry for all the ages. In spite of that, practical training on robotics is still in its first stages in the field of art and pedagogy. So, the research recommended the need to make a map for the future of the professional in using technology for the generations of the future.
3. Research Methodology and procedures:

3.1 The research method in the study:
The study used the experimental curriculum to discuss the efficiency of the computerized training program which is based on programming the educational robotics in developing the skills of creative thinking for the students in the basic eighth grade. The study used the experimental design known as: the design with pre and post measurement for two groups one of which is control group (Khater, 2001).

3.2 The sample of the research:
The sample of the research consisted of the Students in the eighth basic grade at Manba'a El-Hekma School for basic education in Dhofar Governorate. The sample was selected intentionally in the academic year 2018/2019, they are 30 Students and they were divided into two groups: experimental with 15 students and control group with 15 students,

3.3 Tools of the study:

3.3.1 Building the computerized training program:
Top of Form
The program aimed at the using the default three dimension environment of the robotics to build different models of the robotics, programming the robots to get information from the sensors for performing certain functions, employing the mathematical processes and the available properties in EV3 program of programming the robots.

The description of the program: The program started with a preliminary introduction about the consequent developments in the field of education and the traits of this era, the students need for the educational robotics as one of the technological innovations and its importance for the students in the light of accelerating developments. The general aims of the program were identified for the recommended program, then the content of the program was included: installing the model robots using Lego Digital Designer, sensors and multiple tasks and wires of data, the training program was designed using the multimedia technology with its different elements that were used through one of Google sites. The tools used for e-learning were identified and described and sextant goes of education and learning used, in explaining the lessons of the program, were identified. Those sextant goes represented in the preliminary accompanied with the innovative educational multimedia, discussion, brain-storming, self-learning, practical presentation and learning with discovering, practical model and training tasks. Then enriching activities were identified for each lesson aiming at enriching the Students' knowledge about the lessons of the program.

- The procedures of the program: After the researcher prepared the required educational materials for teaching the program and they prepared the necessary tools for evaluating the Students, then they prepared designing a forum on the internet aiming at deepening the content of the program related to programming the educational robotics and communicating the Students with each other in an interactive environment about the subjects of the content easily, with the possibility to get the feedback with its different shapes anytime and the possibility to add links of outside websites to be reached directly by the Students and designing an educational website by the tool of Google sites on the internet aiming at teaching the Students the content of the program related with robotics programming, the training materials were uploaded on the following website: https://sites.google.com/site/in4ev3/. Figure 3 shows the educational website.
Figure 3. the educational website of training on the programming the educational robotics.

- An e-mail was created and the Students were informed with it, aiming at communicating with teacher to solve any problem they may confront on the period of application and to send any links of websites and files that represent a number of enriching activities related to the content, the e-mail is: Web2_2010@hotmail.com

- The Students were prepared for studying the program by explaining its idea and that continuing in studying it as desired by each student. That means joining the experiment of the program is not obligatory but it is optional. The students were directed to study the program by themselves on the internet, and they were followed up weekly by the efficiency in the content proficiency and verifying that the Students are in good pace in studying the program by asking some questions related to the program aiming at supervising the Students' following up of studying the program. The Students continued in studying the program by themselves for eight weeks.

3.3.1.1 The validity of the program:
After finishing the preparation of the program, the researcher presented the program for a group of specialists in the field of information technology, curricula, methods of teaching and education technology.

3.3.1.2 Evaluating the program:
After finishing the process of arbitrating, the program was applied on the sample of the research, then the final form was applied for the tools of measurement to verify that the program achieved its previously set objective. Those tools represented in Torrance Pictorial Test of Creative Thinking (B) to measure the skills of creative thinking for the Students and the evaluation card of the product for measuring the skills of the Students in the basic eighth grade in producing creative projects based on programming the robotics.

3.3.2 Preparing the evaluation card:
To prepare the evaluation card, some studies and researches concerned with that aspect, were reviewed. That card was prepared according to the procedural following steps:

- **The aim of the card:** It aimed at measuring the skills of the Students in the basic eighth grade in producing creative projects based on programming the robotics.

- **Primary Formulating the items of the card:** Based on the theoretical framework of the research, researches and previous studies that used the evaluation cards, the items of the evaluation card were primarily formulated in a way that the following considerations were taken: the statement is short and clear, the statement declare the required content easily and the main parameters of the card reached the items of (14) skills.

- After finishing the card, the researcher presented the card for a group of specialists in the field of curricula and methods of teaching and in the field of education technology and in the field of psychology to verify its validity. The arbitrators confirmed its validity.

- The card was applied for the achievements and costs of the Students in the basic eighth grade which are based on the educational robotics,

- Data were collected and treated statistically.

### 3.3.3 Torrance Test of creative thinking:

**The aim of the test:** Measuring the skills of creative thinking (Fluency, Flexibility and Originality), through which the researcher aimed at studying f providing those factors in the works of the Students in the experimental group after performing the computerized training program.

**The sources of the measurement:** The researcher used Torrance Test of Creative Thinking of the modal pictures (B) codified on the Yemeni (El-Heity, 2008).

- The measurement was reviewed by a group of specialists in Curricula and Methods of Teaching and Education Technology to confirm its validity and to express their opinions concerning their suitability for the members of the sample and the extent of measuring for what it was prepared for.

- The test was applied primarily on the sample of the Students in the basic eighth grade in Manba'a El-Hekma School in the first term of the academic year 2018/2019. After fifteen years of re-applying, the coefficient of correlation between the two applications using SPSS program, so the value of correlation was 0.82 which is a high value that indicates the reliability of the test.

- After calculating the stability and the validity of the test, it was applied on the members of the sample in the first term of the academic year 2018/2019.

- Data was collected and treated statistically.

### 4. Results & Discussion

#### 4.1 The results related to research question one:

What is the computerized training program based on programming the educational robotics in developing the skills of creative thinking for the Students in the basic eighth grade?

The research depended on the theoretical framework of the study, on the results of the previous studies, and researches in the field. The program included the general aims: a) using the default three- dimensional environment of the robotics in building the models of the different robotics, b) programming the robotics to get information from the sensors for performing certain functions,
and c) employing the mathematical processes and the availability characteristics in EV3 program to program the robots. The units of the recommended training program: The first training unit: installing the model robots using Lego Digital Designer, The second training unit: Sensors and the third training unit: the variety of tasks and wires of information. The training program was designed by using the technology of multimedia with its different elements that were used through one of the Web 2 tools (Google sites). Teaching and learning strategies: They were used to explain the lessons of the program. They are represented in the preliminary lecture accompanied by the innovative educational multimedia, discussion, brainstorming, self-learning, practical presentation, learning by discovery, practical model and training tasks. The enrichment activities: Those activities were identified for each training unit aiming at enriching the Students' knowledge about the lesson of the program.

4.2 The results related to research question two:
What is the efficiency of the computerized training program which is based on programming the educational robotics in developing the skills of creative thinking for the Students in the basic eighth grade?

Table 1. The differences between the two averages of the pre and post measurement in the test of creative thinking

<table>
<thead>
<tr>
<th>Type of application</th>
<th>N</th>
<th>M</th>
<th>STDEV</th>
<th>T- test</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>15</td>
<td>20.17</td>
<td>5.32</td>
<td></td>
<td>Significant to level 0.001</td>
</tr>
<tr>
<td>Post</td>
<td>15</td>
<td>49.75</td>
<td>6.73</td>
<td>10.61</td>
<td></td>
</tr>
</tbody>
</table>

The result in table 1 refers to the efficiency of the computerized training program in developing the skills of creative thinking for the Students in the basic eighth grade. The first hypothesis is achieved because there are differences with statistical indication on the level of 0.05 between the two averages of the degrees of the Students in the experimental group and the degrees of the Students in the control group in the test of creative thinking for the benefit of the experimental group. Perhaps that points out the clear formulation of the training units and its suitability for the status of the students, in addition to the continuity of reaching the educational units. So, the student can get the information he/she wants whenever the time is suitable for him/her.

Those results correspond to the results of Khairy's study (2005) which showed that the learning environment through the internet which helped the students to gain information and in the success of learning using the internet asynchronously. In addition to using the internet in designing the curricula and the Strategies of presenting them and it proved its success in increasing the motivation of the learners.

4.3 The results related to research question three:
What is the efficiency of the computerized training program which is based on programming the educational robotics in producing creative projects based on programming the robotics for the Students in the basic eighth grade?

Table 2. Significance of (t) between experimental and control groups in the evaluation card of the product in producing the creative projects based on programming the robotics.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>M</th>
<th>STDEV</th>
<th>T- Test</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>15</td>
<td>12.4</td>
<td>4.19</td>
<td></td>
<td>Significant to level 0.005</td>
</tr>
<tr>
<td>Experimental</td>
<td>15</td>
<td>21.6</td>
<td>4.78</td>
<td>7.76</td>
<td></td>
</tr>
</tbody>
</table>
The result in table 2 refers to the efficiency of the computerized training program based on programming the educational robotics to produce creative projects which are based on programming the robotics for the Students in the basic eighth grade. The second hypothesis is achieved because there are differences with statistical indication on the level of 0.05 between the two averages of the degrees of the Students in the experimental group and the degrees of the Students in the control group in the card of evaluating the creative projects based on programming the robotics for the benefit of the experimental group. Those differences can be returned to the following reasons:

- The variety of stimuli, introduced for the Students in the education situations which are related to those subjects, is considered an important factor for achieving the efficiency and speed of learning.
- Building education in the learner's memory is influenced by collecting a number of interactive multimedia such as using the technology of multimedia. Using the element of the technology of multimedia is useful for the creativity of training presentations that require showing the learners movement and presenting several synchronous stimuli together.

That can create synchronization in the interaction of the learner's senses. This result is aligned with the previous studies and researches such as Amer's study (2001).

**Conclusion**

This research aimed at detecting the efficiency of a computerized training program based on programming the educational roboticists to develop the skills of creative thinking for the Students in the eighth grade of the basic education. The researcher used the experimental curriculum with the two groups; controlled and experimental to achieve the aims of the research and to test its hypotheses. The sample of the research consisted of 30 Students during the first term of the school year 2018/2019 and they were selected intentionally. Each group included 15 Students who were trained to program the educational robotics using the computerized training program. Torrance test of creative thinking was applied before and after on the two groups, in addition to an evaluation card of the product for the projects of the Students.

The results showed that there are differences with statistical indication on the level of 0.5 between the two averages of the degrees of the experimental and the controlled groups, between the measurements before and after the application of the creative thinking test and in the evaluation card of the product of the Students' projects for the benefit of the experimental groups. Also, there are differences with statistical indication between the measurements before and after for the benefit of the experimental group.

The research recommended to merge the techniques of the educational robotics and the artificial intelligence in teaching and education, in the training of the female teachers on using that technology and encouraging them to employ it in the process of teaching, and to adopt the training electronic program prepared in this study to be included in the non-class activities in the schools of basic education (5 - 10) to develop the skills of creative thinking for the Students.
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Blended CEFR in Enhancing Vocabulary among Low Proficiency Students

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Abstract

Emphasis on English language proficiency and digital literacy among Malaysian students in schools have been given utmost priority in the Malaysian Education Transformation (2013 – 2025). With the introduction of Common European Framework of Reference (CEFR), (Council of Europe, 2001) the emphasize for low proficient students to acquire vocabulary knowledge is crucial for them to move progressively into the next band as stated in the CEFR global scales. Yet, concerns arises as how the implementation of (CEFR) will impact the low proficient students with almost none to limited vocabulary acquisition. This poses an extremely high risk of these students being left far behind as English is a second language to most students. Thus, the aim of this study is to use blended learning to expand the vocabulary acquisition among low proficient students and enable them to move progressively in the CEFR band. The mixed method study employed questionnaires, face to face interviews, pre and post test and observations to collect data from 20 low proficient students aged 14 from a semi urban secondary school. Data collected were analyzed quantitatively and qualitatively. The study found that using blended learning not only enhances low proficient students vocabulary count in CEFR English but it also promotes autonomous learning and understanding of sentence structures. Hence, the use of blended learning proves to be a crucial alternative for low proficient students to enhance their vocabulary knowledge and understanding of sentence structures through digital literacy that is capable of motivating and challenging them to achieve their highest potential.

Keywords: blended learning, CEFR, global scales, low proficiency, Malaysian context, vocabulary enhancement,

Cite as: Krishnan, P. D., & Yunus, M. M. (2019). Blended CEFR in Enhancing Vocabulary among Low Proficiency Students. Arab World English Journal (AWEJ) Special Issue on CALL (5). 141-153. DOI: https://dx.doi.org/10.24093/awej/call5.11
Introduction

General Introduction

In Malaysia, the transition of digital literacy into language classroom has been emphasized in the Malaysian Education Blueprint (2013 – 2025) in the 2nd and 7th shift where both shifts priories on English language and technology being essential tools for youths to be marketable in today’s new emerging world. This is also emphasized in the National Transformation TN50 (2021- 2050) in producing youths who are equipped in contributing to the economic development, social advancement and innovation. One of the methods is to produce youths who are not only well-versed in the national language but also in English language as well.

The Malaysian Ministry of Education aims for all students to be able to use English language independently after leaving the education system. Globalization has brought on the wide use of English language internationally. Thus, students will benefit immensely with the bilingual policy introduced in learning two languages and keeping up with the rapid globalization (Zaba, Ramadan, Gunggut, Chuah, & Katsuhiro, 2011). Nevertheless, the proficiency level in English language among the students in semi-urban and rural schools have been very worrying especially among the low performing students. Their inability to cope with the language skills because of very limited vocabulary has contributed to these category of students being side-lined as a group of low performers not only in English language but other subjects as well. Less proficient students in secondary schools, especially those in lower grades, had problems understanding the materials set for students at their age mainly due to a lack of vocabulary and an inability to master the structures of the language (Latsanyphone & Bouangeune 2009).

Background of Study

The introduction and implementation of Common European Framework of Language (CEFR) into the English language curriculum in Malaysian schools is the Ministry’s effort in up-skilling student’s English skills regardless of their proficiency level. This is to meet with the rapid economic globalization of producing quality student outcomes by the year 2025. It gives opportunities for low proficient students to adjust their learning which is aligned with the CEFR international global scales for each of the skills taught. “The framework also defines the proficiency levels that allow learners’ progress to be measured at each stage of learning and on a lifelong basis” (Council of Europe, 2001, p. 1).

With the use of blended learning in a CEFR aligned English language classroom will be a boost in helping students of different levels of proficiency to control the pace of their learning. While the face to face interaction in class can be assessed and monitored by teachers to ensure the lessons are aligned with CEFR’s “can do statement” stated in the international global scales which is on the principle of equity. Blended learning is acknowledged to be the best approach that can help low proficient students in their learning process. This is supported by a study done by Vasbieva et al. (2016) that blended learning offers approaches to solving one of the main tasks of modern traditional education: the implementation and development of each student’s potential abilities. Blended learning using face to face classroom activity and online instruction is becoming the alternative that is popular with language educators and thus so far several studies have shown that blended learning is highly appreciated and positively rated by the students (Popolzina, 2014).
Using blended learning in a CEFR classroom will enable low proficient students to choose materials and resources that are suitable within their capability levels. The curriculum of CEFR introduced in lower secondary level uses Learning Standards that are derived from the CEFR international scales and teachers are required to use material consisting of textbook materials (Pulse 2 text book) and non-text book materials. The CEFR is designed to accommodate an action-oriented approach in learning a language and use. Thus, the use of blended learning for non-text book materials in Malaysian secondary schools comprises 75% of the curriculum while only 25% is based on the text book Pulse 2 provided by the Curriculum Development Division (BPK). This will provide a platform for low proficient students to be able to choose resources and materials within their proficiency capability and motivate students to complete tasks which CEFR describes as “can do statements”. Thus, this paper aims to explore the use of blended learning among low proficient students in enhancing their vocabulary knowledge in CEFR English language.

Literature Review

Blended Learning in Malaysian Education System

The Malay language is the national language and the medium of instruction in Malaysian public schools. English language is the second language which all students are required to learn and master. It is recognized as an important second language in view of its status as the lingua franca of the world, essential for economic advancement and international communication. The introduction of CEFR in English language curriculum has changed the platform of using the traditional standardize textbooks to finding alternative materials in teaching school students in the classroom.

The adaption and adoption of blended learning in education has been gaining immense popularity in recent years with positive results. The use of e-learning in education system has been mushrooming all over the globe especially in higher education. In fact, this type of Computer-Assisted Language Learning (CALL) seemed to be more and more prevalent (Yunus et al., 2013., Yunus, Salehi, & Amini, 2016). In Malaysian context, the priority of Information and Communication Technologies (ICT) in education can be seen in the National Education Blueprint (2013-2025) in Shift 7 which is to “leverage ICT to scale up quality learning across Malaysia”. Grapragasem, Krishnan, and Mansor (2014) state that the virtual classroom, e-learning and blended learning are gaining momentum and becoming the current delivery mode of teaching and learning. The up skilling of Malaysia’s modern education system core appeared during the 1950s when it was called for a centralized national system of education. Base on the results of 2012 PISA exam, scores in reading (398) and science (420) are well below the OECD average of 496 and 501, respectively. Among their surrounding East Asian countries that participated in the 2012 PISA, Malaysian students only outperform their peers from Indonesia (OECD, 2012).

To overcome these issues, the Ministry of Education introduced the 2013 Malaysia Education Blueprint which established clear, ambitious goals for the education system to be accomplished by 2025 (Ministry of Education Malaysia, 2015). The Blueprint identifies five key system aspirations: to achieve 100 percent enrolment from preschool to upper secondary by 2020 (access); to be in the top third of countries in international assessments (quality); to yield a 50 percent reduction in achievement gaps (equity); to enhance shared values and experiences by embracing diversity (unity); and to maximize students outcomes within the current budget.
(efficiency). In the effort to reach these aspirations, the ministry outlined eleven shifts to transform the system, which include leveraging information and communication technologies (ICT) to scale quality learning across the country.

Computer labs will be used to support a variety of blended-learning models. For example, students could access playlists of online content or take fully online courses from a computer lab. Based on the school visits, however, the lab rotation model—in which students rotate into a lab on a weekly or daily basis, and then experience face-to-face instruction back in their classrooms—was by far the most common use of lab space. Teachers use the lab rotation model normally utilizes the computers in such a way that they could easily identify student pain points (e.g. via individual or classroom-wide quizzes), which goes on to shape their non-tech lesson plans using some of that data. (Fisher, Bushko & White, 2017. p. 41).

**Common European Framework of Reference (CEFR)**

With the ministry’s effort to transform language education in Malaysia, the introduction of CEFR was implemented at an appropriate time. With the 4th Industrial Revolution looming, a revamp in the education system in Malaysia needed to be revised and revamped in order to prepare youths for the digital world. This is important as English language at tertiary level is at Phase 2 of the roadmap (2017-2020) and the Malaysian Education Blueprint (MEB) waves 1-3 (2013-2025).

CEFR is developed by the Council of Europe. It comes with a general framework which indicates what language learners need to learn to be able to use a foreign language effectively in practice. The CEFR “provides a common basis for the elaboration of language syllabuses, curriculum guidelines, examinations, textbooks, etc. across Europe” (Council of Europe, 2001, p.1). It describes in a comprehensive way what language learners have to learn to do in order to use a language for communication and what knowledge and skills they have to develop to be able to act effectively (Yamat, Umar & Mahmood, 2014).

The CEFR is derived from the international global scales where it distinguishes five communication skills, which are listening, reading, spoken interaction, spoken production, and writing. It also gives suggestive activities which are deemed appropriate for that particular skill. Language proficiency is measured in relation to the five skills on a scale beginning with A1, and progressing through bands A2, B1, B2 and C1 to C2. Proficiency in each skill is defined at each level by a series of “can do” statements. An important reason to set up and follow international standards is that they can be used to compare different language education systems, and to assess a single country’s language education system relative to international best practice. This process is referred to as “benchmarking” (English Language Standards and Quality Council, 2015, p.64).

**Impact of English language on Low Proficient Students**

Language proficiency is an important influencing factor of interactions among students from the different nationalities. According to Tavakkoli and Rahshandehroo (2014), language proficiency refers to the level of skills that an individual can speak, write and read a language or understand the language. In a qualitative study of cultural experiences of Arab and American students of American colleges, Abdulla (2008) also points out that language is believed to be an obstacle for people, including the ones who are able to speak the different languages.
Low proficiency learners are often categorized by their academic performance in tests, examinations or classroom learning tasks (Hsu & Sheu, 2008). Most Malaysian rural English as a second language (ESL) students possess low proficiency levels. However, despite problems related to the learners’ remote location, most weak learners possess the desire to improve yet they are hindered by the lack of learning styles and the inability to use English language learning strategies.

To address this issue, a practical approach is needed to encourage these learners to acquire learning hows to learn skills and to take their learning beyond the classroom walls. With CEFR, low proficient students are given the leeway of controlling their pace and learning which is catered to individual preference and the use of blended – learning, it will up skill their English skills by enhancing their vocabulary count.

Method
Research Design
The study employs an explanatory action research design. This research study also applies mixed methods which are quantitative and qualitative that analyses and merges data from both resources which are survey questionnaires and face to face interviews with pre and post-test and observations. Quantitative data may support or contradict findings from the literature, while the qualitative data provides deeper insights as to why it is so.

Procedure
The study was carried out among 20 students in the age of 14 years old from a semi urban school. The 20 students were chosen using purposive sampling base on their level of proficiency in English Language using the class room assessment (PBD) which evaluates their English proficiency in all the four skills and also their summative grades in English subject.

The students were divided into groups of five members based on their English language achievement, forming a total of four groups. A blended learning workshop was conducted at the beginning stage to help the low proficient students to familiarize themselves with blended learning using station rotation and lab rotation. The blended learning phase was conducted for about 4 weeks using the CEFR related themes from the Pulse 2 textbook. Prior to that a pre-test was conducted to gauge the low proficient students’ vocabulary level and their understanding of sentence structures. At the end of the blended learning phase, questionnaires was administered to all the 20 low proficient students and 8 students consented to be interviewed.

Data Analysis
Questionnaires were completed and analyzed quantitatively and qualitatively using descriptive statistics and thematic analysis. The thematic analysis were identified according to categories which are advantages and disadvantages. Online interviews were transcribed and analyzed using thematic coding and students were given code names (CB1, CB2 CB3…) and so on. The interviewees were also given the same code name based on their numbering using the chrome books that they used. The pre-test score which consist of vocabulary assessment was collected. The scores was accumulated in the form of percentage in comparison to post test scores at the end of the blended learning phase. This provided data on students’ achievement in the vocabulary.
enhancement and sentence making and answered the research questions pertaining to blended learning implementation among low proficient students.

Findings and Discussion
This section presents the data collected from the study on how the use of blended learning impacts low proficient students vocabulary count and understanding of sentence structures and their acceptance level of learning using blending learning.

Vocabulary Enhancement
This subsection portrays the findings from the questionnaire in regard of low proficient students’ vocabulary enhancement.

Table 1. Vocabulary Enhancement

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary is important when I learn CEFR English.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>5</td>
<td>4.25</td>
</tr>
<tr>
<td>I learn better with the pictures and CEFR words from using online materials.</td>
<td>0</td>
<td>0</td>
<td>3 (15)</td>
<td>16 (80)</td>
<td>1 (5)</td>
<td>3.90</td>
</tr>
<tr>
<td>The CEFR words from Pulse 2 is easy to remember when I use video clips from YouTube via chrome book to learn.</td>
<td>0</td>
<td>0</td>
<td>4 (20)</td>
<td>14 (70)</td>
<td>2 (10)</td>
<td>3.90</td>
</tr>
<tr>
<td>I practise the vocabulary of CEFR with my group members through online learning and tasks.</td>
<td>0</td>
<td>3 (15)</td>
<td>3 (15)</td>
<td>12 (60)</td>
<td>2 (10)</td>
<td>3.65</td>
</tr>
<tr>
<td>I use the online dictionary to help learn vocabulary.</td>
<td>0</td>
<td>0</td>
<td>2 (10)</td>
<td>8 (20)</td>
<td>10 (50)</td>
<td>4.40</td>
</tr>
</tbody>
</table>

In terms of percentage in Table 1 the analysis revealed that almost all the low proficient students are aware that vocabulary is an essential part in learning a language and CEFR English language. With the mean obtained of (M=4.25) it implies that the low proficient students found the statement general true. This indicates that the students realize that the importance of vocabulary in mastering English language. For the item, I learn better with pictures from online resources, the mean scored is (M=4.60) which is high, showing that low proficient students learn much better in acquiring CEFR vocabulary using sources from the internet.
The data shows that 85% of the low proficient students prefer using ICT materials to learn vocabulary instead of hardcopy materials given in classroom. Using the chrome book and finding websites that interested them is a motivational tool. This is also reflected during the lab rotations, where the researcher observed that the students were more engaged and motivated with the lesson. They are able to understand better in context of the topic.

**Blended Learning Experience**

The use of blended learning among low proficient students showed improvement in students’ vocabulary, language aspects, interaction and focus attention in the lesson.

Table 2. *Blended Learning Experience*

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy lessons using Blended learning compared to normal lessons.</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>14 (75)</td>
<td>6 (25)</td>
<td>4.30</td>
</tr>
<tr>
<td>I find the station and lab rotations help me to master more vocabulary words.</td>
<td>0 (0)</td>
<td>2 (10)</td>
<td>3 (15)</td>
<td>12 (60)</td>
<td>3 (15)</td>
<td>3.80</td>
</tr>
<tr>
<td>Using Blended Learning makes me able to interact with other students better.</td>
<td>0 (0)</td>
<td>3 (15)</td>
<td>3 (15)</td>
<td>12 (60)</td>
<td>2 (10)</td>
<td>3.65</td>
</tr>
<tr>
<td>Blended learning made me interested to learn CEFR English.</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>2 (10)</td>
<td>16 (85)</td>
<td>2 (10)</td>
<td>4.00</td>
</tr>
<tr>
<td>I feel bored in a Blended learning environment.</td>
<td>13 (55)</td>
<td>4 (20)</td>
<td>3 (15)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>1.50</td>
</tr>
</tbody>
</table>

From the study, low proficient students are able to improve their vocabulary count, sentence structure understanding, promote autonomous learning and focus attention in the classroom as can be seen in Table 2. From the questionnaire above majority of the low proficient students have agreed very strongly that the use of blended learning aids them in learning CEFR vocabulary. This reflects that low proficient students enjoy English lessons in blended learning environment. The use of lab and station rotations has also given a great impact on increasing their vocabulary with the mean 0f (M=4.00).

This shows a soaring score that blended learning encourages low proficient students to learn CEFR English compared to traditional method. Though there were still 15% of the students whom were neutral of this statement, but the majority of the low proficient students were interested and engaged throughout the blended learning lesson.
Pre Test and Post Test Findings.
The pre and post test was administered to the low proficient students prior to the blended learning phase and after. The study found that there were tremendous increase in vocabulary and understanding of sentence structures as shown in Figure 1.

![The Use of Blended Learning in Enhancing Vocabulary Among Low Proficient Students](image)

Figure 1. The use of Blended Learning (Station & Lab Rotation) to enhance vocabulary

Figure 1 shows there is positive increment in both the vocabulary count and the percentage after the use of blended learning. There is an increment of about twenty five percent in the vocabulary understanding and count after the students watched online videos, listened to interactive stories, digital resources, games and mostly effective of all is the online dictionaries used by low proficiency students. This study clearly indicates to the researcher that the using technology and gadgets is effective in holding low proficiency students’ focus in class. It is extremely relevant in moving low proficient students to higher bands in the CEFR scale. The CEFR curriculum emphasizes on students moving progressively in an interactive way from one CEFR level to another.

It is proven from the results from Figure 4.1 that low proficient students are able to move progressively up into the CEFR bands using blended learning. It helps in engaging students’ participation in classroom activities and solidifies the understanding of vocabulary as well as improving their understanding of sentence structures as well. This study clearly indicates to the researcher that the use of technology and gadgets is effective in holding low proficiency students’ focus in class. This is similar as reported by Tam, Kan and Ng (2010) in their study that a computer-mediated environment is ideal for low proficiency learners who lack confidence using English in the face-to-face setting. It is extremely relevant in moving low proficient students to higher bands in the CEFR scale. Students need to move progressively from A1 level to A2 level which can be
from low, mid or high A2 in the CEFR scale. The CEFR curriculum emphasizes on students moving progressively in an interactive way from one CEFR level to another.

Similarly, it was found that the students are able to identify vocabularies from the reading excerpts and answer the questions correctly after using blended learning in the post test. This clearly indicates that the use of blended learning while helping to hold the attention and focus of low proficiency students with the use of chrome book, it also enhances their receptive skills by listening to targeted sections of the online resources. Students were able to control the pace of their learning in the classroom while teacher acted as a facilitator.

Apart from that, the use of ICT integration in blended learning is a confidence boost among low proficiency students. This is also supported by Yunus and Suliman (2014) in their study that the blending of ICT in literature teaching benefits students in motivational aspects. The ability to maneuver their way using the internet to access resources related to the lesson and videos (YouTube), digital dictionaries, online games and many more shows that ICT integrated less promotes 21st century learning and students can choose the pace of the lesson in accordance to their learning ability.

This is an essential finding as low ability students poses the biggest problem in almost every school in upgrading English language. The fact that the use of blended learning using chrome book via station and lab rotation using internet (YouTube) is one method to help this group of students to improve their proficiency level. It also fulfils the nation’s vision of creating students whom can master a standard of English language. Therefore, the data demonstrated that low proficient students activities during the researching, brainstorming, reading, and task activities of the blended learning stations on their respective group ultimately produces engaging and interactive English lesson.

This is align with a study conducted by Olasina (2017) that the usage of videos in teaching and learning has a boost on the students’ interest and confidence to learn more. This ultimately enhances their vocabulary mastery and moving them progressively into a higher CEFR band which can be from A1 level to mid or high A2 level in the CEFR as proven in the data of the post test. However, not all the low proficient students were able to involve themselves effectively as some of them lacked the intrinsic motivation to engage in class activities. Nevertheless, there are many benefits to using blended learning among low proficient students in CEFR English classroom.

**Discussion and Implication**

From this study, it is proven that the use of blended learning helps low proficient students’ improve their vocabulary by learning new words and reinforcing their mastery of the targeted vocabulary from the CEFR curriculum. This is reflected in the findings and the data presented. The low proficient students show a remarkable aptitude and ability to use language learning strategies to aid them in learning words and vocabulary from the online tools. This corresponds with the study conducted by Vasbieva *et al.* (2016) that blended learning offers alternative learning strategies to suit a learner’s style.

This is definitely reflected in their post test result of improving their vocabulary count after the blended learning experience. In the blended learning phase, the low proficient students are able to
use YouTube videos, interactive story boards and games to remember words and targeted vocabulary. This is supported by studies done by Ibrahim & Yusoff (2012) of students using YouTube video during blended learning sessions to improve their language skills. In advertly, the students are able to create language strategies by using these online tools to master vocabulary.

The learning of vocabulary among low proficient students using ICT is another boost as most of them enjoy the use of chrome books. This indicates the use of ICT through the use of blended learning should be applied to low proficient students and not only focus on intermediate and good students only. This supports the study conducted by Yunus, Sallehi & John (2013) that 96.2% teachers believe that using visual aids creates a learning environment that is enjoyable in the literature classroom. This promoted independent learning among low proficient students that would enable them to control their learning and it will not be limited during class hours online. Low proficient students can take these learning strategies’ outside of school or offline to continue their vocabulary learning and language sentence comprehending that would help them to move progressively into a higher CEFR band level.

Most of the low proficient used the online dictionary as their guide to learning new words and vocabulary. They found it very helpful as it gave them the meaning of words in their first language (L1)–Malay language. This enable them to comprehend meaning of words and sentence structures in order for them to get the gist of sentences. Lightbown and Spada (2013) supported this in their research that teachers can assist low proficient students to expand their style of learning strategies and develop greater flexibility in using learning strategies using instructional materials such as videos and digital tools to give students opportunities to practice the language outside of the class. As stated by Yunus, Osman & Ishak (2011) interaction between the students and the teacher becomes extremely important for successful relationship throughout the school year and this can be achieved through the face to face interaction.

In this study, low proficient students will benefit greatly in bridging the gap of language barrier with the intermediate and good students by using blended learning in learning CEFR English. In this study the low proficient students are able to use You Tube videos relating to the CEFR topics to familiarize themselves with content knowledge and vocabulary. They are able to use online dictionaries that gives the meaning and translation in their first language (L1) and enable them to understand the content, gather informational knowledge and understand sentences and phrases.

The low proficient students chose online materials, video and games that are related to the topic at hand and using the digital dictionaries were able to learn the targeted CEFR vocabulary. Furthermore, digital tools enable students to use places for learning other than the classroom, allowing them to learn anywhere and anytime (Burston, 2014, p. 103-125). Students can choose from a variety of activities, adapting them to the learning context. With this wide variety of online source, the blended learning experience gave them various platforms to practice the targeted language interactively using the chrome books as well as socially engaging with group members. However, it is well proven in this study using blended learning increases vocabulary knowledge among low proficient students.
The findings from the questionnaire and post-test also showed that low proficient students acquire better understanding of sentence structures which enable them to answer comprehension questions. In this study, the data from the post test showed that most of the low proficient students had improved tremendously not only in their vocabulary but also in the short reading excerpts. This indicates that the use of blended learning exposes students to English base environment and gets them to familiarize themselves with words and phrases.

Moreover, the blended learning using online resource were helpful throughout the learning phases. Blended classroom can be enhance by a technology to cover areas of the curriculum that is not covered in the classroom (Yunus, 2018). This relates to content knowledge where in the learning phase, the low proficient students were able to compile their online sources and web references in different, creative ways. Brainstorming was where the blended learning phase was the most helpful. Many interesting manners of online learning tools generated meaningful learning with the use of online dictionary. Some of the low proficient students even showed their IT savvy capability by downloading and uploading Medias like images, games and videos into their Google Drive which they shared with their group members and other groups. However, there were those who were passive learners who just followed their group members. As a result, the more active students compensated more in their group task and activities. Nevertheless, there were groups who practiced genuine group participation in the blended learning and were able to compile media sources which they enjoyed learning independently.

Conclusion
The findings of the study indicates that using blended learning among low proficient students in learning CEFR English enhances their vocabulary knowledge, language aspects of understanding sentence structures, promoting autonomous learning and enabling them to harness their ICT skills as well. This in long term would enable them to comprehend all the four skills being taught in CEFR English and help low proficient students to move progressively into the next CEFR band from A1 level to A2 level and so forth. The use of blended learning has proved in this study to be an alternative method in aiding teachers in not only enhancing low proficient students vocabulary and understanding of sentence structures but also in promoting autonomous learning by using their ICT skills.

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References


EFL Learners' Lexico-grammatical Competence in Paper-based Vs. Computer-based in Genre Writing

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Abstract

With new technology, writing became a skill that is being developed year after year. The present study questions whether there is a difference between paper-based and computer-based writing in terms of errors and lexico-grammar. It aims at exploring sentence-level errors and lexico-grammatical competence in two writing genres in a collaborative writing environment within paper-based and computer-based writing. A sample of 73 female intermediate level learners participated in the study at the University of Business and Technology (UBT), in Saudi Arabia. This mixed-methods research is significant in the literature of second language writing since it highlights genre awareness, lexico-grammatical competence, analyzing errors, and collaboration in two styles of writing. The reading-based writing tasks acted as a reflection of the learners' lexico-grammatical competence on paper and via Web 2.0 tool (Padlet). Statistically, the Mann-Whitney U-tests showed that there was no significant difference between paper-based and computer-based groups in the sentence-level errors in narrative genre, whereas there was a significant difference between the two different tools of writing groups in the sentence-level errors in opinion genre. However, there was no significant difference between paper-based and computer-based groups in the clauses (lexico-grammar) of the two groups. Immediate semi-structured interviews were conducted and analyzed through NVIVO to get more insights from the learners to explain the comparison between the paper-based and the computer-based writing. In light of the significant findings, implications are sought to create an equilibrium between paper-based and computer-based writing, along with enhancing collaboration in second language writing.

Keywords: Computer-based typing (CB), Computer-assisted language learning (CALL), Collaborative writing, Error Analysis, Lexico-grammar, Paper-based writing (PB), Text Analysis, and Writing Genre

1. Introduction

With new technology and globalization, second language (L2) learners' preferences in learning within a particular context, as in Saudi higher education, should be highlighted and taken into consideration. In the current study, two writing genres were highlighted, i.e., narrative and opinion genres according to a writing preferences survey. Writing tasks were designed as reading-based, to help the learners approach a comprehensible input that has its own genre, style, and tenses, in the collaborative writing environment. Reading-based writing tasks helped the learners gain ideas about a specific topic and brainstorm for new ideas for their writing.

Comparing between the participants' lexico-grammatical competence in paper-based writing and computer-based writing was highlighted to see which tool of writing was more effective in terms of lexico-grammar. Lexico-grammar or functional grammar is the interconnection between grammar and the meaning behind it, so in this study, the targeted competence was learners' understanding of the different tenses and how they use them in different writing genre. In the current paper, corrective feedback was not the aim, yet recognizing the learners' lexico-grammatical competence in writing was the core of this investigation. Error analysis was a tool which is used to analyze lexico-grammatical errors in the learners' writing texts, but it was not a tool of giving feedback.

2. Rationale and Aim

Collaborative writing is the new turning point that views a type of the sociocultural philosophy of Vygotsky, along with new literacy. Writing is a social activity that could be more motivating if it is done collaboratively in groups rather than individually. The current study is paramount because "Saudi English foreign language learners are somehow stereotyped as poor writers of English for various reasons, namely: the complexity of the writing skill, and the culture's view of forming meanings through writing" (Shukri, 2014, p. 190). This suggests that collaborative writing would help to foster writing skills for second language writers. It is thought that globalization and multimedia literacy has resulted in a community who are prepared to be digitally literate. In other words, individuals read the latest news through portable devices instead of newspapers, so the input is digitalized and renewed. Moreover, individuals are also exposed to electronic books in iBooks and Kindle in addition to real textbooks. In this study, the writing tasks were done collaboratively via Padlet Web 2.0 tool.

The current study deals with various factors in the literature of applied linguistics and TESOL. From the applied linguistics angle, it deals with comprehensible input that Krashen (1984) stated in his hypothesis. Furthermore, it deals with the reading-to-write approach, multimedia literacy, and collaborative writing from the TESOL angle. The direction of the study calls for integrating writing with comprehensible visual inputs of texts on screens and papers to see how effectiveness Computer-Assisted Language Learning (CALL) is, and whether it fits the Saudi university context or not. A comparative study indicates that L2 learners get higher scores in writing through Computer-based (CB) compared with Paper-based (PB) tasks (Lee, 2004). The writing process in the study under investigation is collaborative, to focus more on the lexico-grammatical competence of the L2 learners rather than performance. Also, the current study states the relationship between L2 writers' sentence-level errors, particularly lexico-grammatical errors, and word-processing; whether hand-written texts or key-board based texts keeping in mind the
dominance of screens and keyboards. To recap, the aim of the paper is to compare between the paper-based writing and the computer-based typing in terms of errors and lexico-grammatical competence (meaningful clauses) in two different genres. The two different genres were selected according to preferences survey the learners undertake before starting the writing tasks.

3. Research Questions
1. Is there a difference in errors between PB and CB writing groups?
2. Is there a difference in clauses (lexico-grammar) between PB and CB writing groups?

4. Literature Review

4.1 Lexico-grammar in L2 writing

Our focus in this literature is L2 writing and its dominance under the umbrella of TESOL. Reichelt, Lefkowitz, Rinnert, and Schultz (2012) found that writing is dominant since it is used to integrate orthography, grammar, vocabulary, culture, genre awareness, life needs, and communication. Moreover, L2 writing internalizes many types of knowledge, namely input and intake, linguistic codes, schemata, genre, and context (Williams, 2012; Hyland 2003). The L2 writing correlates positively with many aspects, e.g., vocabulary, planning, collaborative metalanguage, and corrective feedback (Ortega, 2012). Thus, as Ferris and Hedgecock suspected, L2 writing is an inception of many aspects, namely genre, lexico-grammar, and communicative competence.

Other vital coinciding aspects that are connected to L2 writing are grammatical structures that are meaningful (lexico-grammar) and add linguistic features to texts. English language grammar consists of four macro parts: the morpheme, the word, the phrase/group, the clause, the sentence, and the text. As seen in (Figure 1) lexico-grammar is a construct that indicates the text and its constituents, and it is internally organizing form-meaning to wording to represent a single cline (Halliday, 2004).

Figure 1. "The Lexico-grammar Cline" (based on Halliday, 2004, p. 43)

A likely explanation is that the text is a meaning-making resource described by lexico-grammar (Halliday, 2004). Referring to Halliday (2004), the hierarchy of composition in English, particularly in writing, consists of sentence, sub-sentence, word, and letter. In the current paper, the focus is on lexico-grammar competence in EFL written texts. According to the TESOL Encyclopedia of English Language Teaching (2018), it is suggested that English language teachers should differentiate between international English and local English with regards to assessing and evaluating the linguistic competence (Rose & Sybre, 2018). Here, the concept of 'dictogloss' is highlighted and defined as form and meaning integration to allow the learners to interact in meaningful texts and genres with mindful attention to linguistics features (Mayo, 2018). In other
words, teachers who are teaching English as a second language should look for accuracy before fluency in their learners' written texts. Meanwhile, 'lexico-grammar' as a construct, should be validated when assessing written texts of second language learners. Despite grammar being an important aspect of assessing the linguistic competence of L2 writers' written production, adding meaning to grammar is now prior to serving communicative competence in texts of different purposes and genres (Frodesen, 2018). Indeed, there is a positive correlation between grammar and lexical items that indicate a faculty of language (Larsen-Freeman, 2009). According to The TESOL Encyclopedia (2018), the conflict is that the goal of teaching English aims at Native Speaker production (NSP) and lexico-grammatical knowledge, which is problematic because of the native speaker of English assessment is dominant around the world as seen in the Common European Framework of Reference for Languages CEFR which is being coached in every context (Faez & Taylor, 2018). So, the current study focuses on the local communicative competence of the learners and their meaningful messages in their written texts.

4.2 The integration of L2 writing with the communicative approach: reading and comprehensible input

Reading is a paramount aspect that is connected to L2 writing. A likely explanation occurs in texts that are assigned to be read using both top-down and bottom-up approaches with regards to recognition of the grammatical and lexical features along with content, reading purposes, genre, and other organizational features (David & De Hoyos, 2018). It is almost certain that second language readers' benefit from both top-down and bottom-up reading approaches. In light of reading and its connection to writing, the reading text is a form of a comprehensible input that is probably should be simplified for the L2 learners in ways that curriculum designers focus on, particularly, grammatical and lexical features (Crossley, 2018). In short, simplification of input should aim at making the input comprehensible and accessible to the L2 readers with regards to linguistic and content information.

However, one of the most common problems in L2 reading is the transfer of ability. As mentioned in one of the TESOL Encyclopedia entries, first language reading affects second language reading, i.e., learners who are active readers in their first language are capable of transferring reading strategies in L2 (David & McGovern, 2018). In other words, literacy skills of reading and writing should be enhanced and fostered in first language (L1) before L2, which might be a gap for Arab L2 learners who are beginners in reading and writing. Therefore, building a culture of reading within the context is of vital importance. A culture of reading can be built when the L2 learner is ready and sees reading as a valuable activity to enjoy (Recinos, 2018). Nevertheless, L2 readers in the Arab context may be ignorant of both content and cultural knowledge of other societies and might have preferences in reading texts and will probably be facing difficulties in reading and writing (Recinos, 2018). Despite grammar being an important aspect of assessing the linguistic competence of L2 writers' written production, adding meaning to grammar is now prior to serving communicative competence in texts of different purposes and genres (Frodesen, 2018). All these factors will be reflected in their texts as outputs (Grabe & Jiang, 2018).

With regards to reading texts as a comprehensible form of input, previous studies have found that even after eight to ten years of second language exposure, L2 learners continue make grammatical errors despite their native-like comprehension (Ahmed & Han, 2018). This gives rise
to the question of whether to give an argument that highlights the importance of reading to write: 'why do language teachers want their learners to read before writing?' According to Mokhtari (2018), prior knowledge is the crucial factor of the other four types of knowledge, namely: "general knowledge, specific knowledge, knowledge of language (forms and functions, and knowledge of how information is organized". It also helps in making inferences and drawing conclusions to prepare for producing texts (Mokhtari, 2018). Therefore, the current study focuses on reading before writing to help the learners produce their own texts.

4.5 The concept of 'Error Analysis' (EA)

It is necessary here to clarify what is meant by Error Analysis (EA). The TESOL Encyclopedia has defined EA as a documentation of errors in L2 learners' output (Hinkel, 2018). According to Corder (1967), errors are faults in the L2 learners' linguistic system of not just of L2 but also the L1. Corder also insists that errors are sets of data and shreds of evidence that the process of the acquisition is taking place. It can therefore be said that both manual error analysis plus computerized analysis of artificial intelligence are vital tools for researchers, teachers, and learners that might help in future research of L2 learners' errors in writing in different contexts. Indeed, understanding L2 learners' errors is quite complex and a valuable pedagogical tool at the same time since it differs from context to context. So, it remains vital in the literature of TESOL and applied linguistics (Derrick, Paquot & Plonsky, 2018). To sum up, language teachers and assessors should give the priority to global errors that corrupt communication and affect the communicative competence.

4.6 Gaps

The current study fills gaps in the literature of L2 writing globally and locally. Globally, previous studies have focused on investigating reading online versus paper-based, but writing, genre, and collaboration were neglected. A study conducted in Taiwan demonstrated that reading comprehension in online reading was more effective that paper-based reading (Huang, 2014). According to Huang (2014), technology plays a crucial role in increasing reading comprehension among learners in general. The limitation of this previous study was the need of implementing qualitative data as in interviews and observations to see the learners' perceptions on online versus paper-based reading.

Another comparative study that was conducted in the United States aimed at investigating ESL writers' performance in paper-based versus computer-based writing in terms of testing. According to Lee (2004), there was no difference in scoring writing performance holistically whether in paper-based or in computer-based testing. Moreover, the study indicated that all the analytic scoring of the computer-based writing test was higher. The experiment of the study was not inclusive of reading-writing connection, collaboration, and genre awareness. Therefore, gaps were found on previous studies in investigating writing are lacked genre awareness, lack of reading writing connection, and lack of collaboration.

In the Saudi context, studies were vital to address gaps in the literature of L2 writing. A study was conducted in Saudi Arabia to investigate the effectiveness of exchanging emails and reading-writing connection on college students to see their literacy development. According to Zaid (2011), the quasi-computer-based study explored the effects of e-mail genre on improving both reading and writing of college students. His study found that learners' attitudes towards
English were positive because of collaboration. Although the study connects writing to reading, genre, and collaboration; it only focused on one genre (e-mails writing), and highlighted vocabulary learning without grammar. Another study in Saudi Arabia highlighted online collaborative writing for learners' who use blogs and feedback checklists. According to Grami (2012), the experience led to improve learners' critical thinking through collaborative writing in general. Although the study highlighted the significance of collaborative writing and online feedback, it neither gave an understanding of a particular problem in learners' online writing nor focused on learners' errors that affects communication.

In light of studies conducted in the Saudi context, there was no comparative study in the literature that emphasized the significance of genre awareness, computer-based versus paper-based writing, and collaboration through new technology, and error analysis of a particular language element that reflected competence. Therefore, the current comparative study fills the gap in the literature of L2 writing by creating genre awareness through learners' preferences, comparing between lexico-grammatical competences in paper-based versus computer-based writing, and analyzing errors without giving feedback to understand the real competence of the learners.

5. Methodology

5.1 Theoretical Framework

The current study epistemologically modeled on constructivism reflects Krashen's competence performance theory, which implies that instruction should not be done without a comprehensible input to be decoded and processed. This happens through reading texts (Krashen, 1984). Consequently, the study gets narrower to one of the socio-cultural theory (SCT) views, which is the Direct Model of Reading for Writing, which implies seeking consciousness and explicitness in teaching writing. For example, organizational patterns of texts, thesis statements, topic sentences, and so on (Hirvela, 2004). As soon as the research gets more precise, the Modelling Approach acts as a direct, explicit model of learning writing through reading and focuses on Computer-Mediated Model or the Computer-Based Writing Model (Hirvela, 2004).

It is paramount to note that the reasons for integrating reading with writing are that, L2 learners, deal with some genres in their educational journey, plus the role that reading plays in imitating models of well-written texts (Hirvela, 2004). Moreover, teaching writing through reading is "an act of composing" to make meaning from a rich input (Hirvela, 2004). Thus, the reading texts that are connected to the writing tasks in the current study reflected Krashen's (1984) comprehensible input hypothesis, the direct model of reading and writing, and the modelling approach.

The pedagogical model that stems originally from SLT, and that the current research deals with is The Computer-Mediated Model, as it is derived from the concept of electronic literacy. Electronic literacy is "not only adapting our eyes to read from screens instead of papers but also adapting our vision of the purposes of reading and writing" (Warschauer, 1997, p. 13). Therefore, the current study reflected the computer-mediated model in Padlet Web 2.0 tool that the computer-based writing groups were involved in. Padlet Web 2.0 tool was used with the computer-based writing groups, because it is provided with online multimedia bulletin boards of each learner all in one screen; you can drag and drop pedagogical content, e.g. images and drafts. Padlet is a means of collaborative CALL tool to motivate the learners to write.
5.1 Participants

The research stratified sample was based on 73 undergraduate female students, aged between 18 and 23 years old, of the foundation year at the University of Business and Technology (UBT). The study grouped the stratified sample as the computer-based/paper-based group. The learners involved in the current study were placed by the institutions in levels five and six, and are characterized as upper-intermediate learners according to the Common European Framework (CEFR). In the UBT context, the classrooms were small with a capacity of 10 to 15 learners. As a result, the 73 learners involved in the current study were distributed in eight classrooms: four classrooms that represent the paper-based group, and four classrooms to represent the computer-based group.

5.2 Research Design

This is a mixed method research that used written tasks analysis as a quantitative method and semi-structured interviews as a qualitative method, to get more insights from the students and to support the statistical results with students' casual perspectives. The main procedure of the current study was doing writing tasks, and the focus was on the first drafting stage (after planning), in order to assess their real lexicogrammatical competence in writing. Learners involved in the current study were distributed in eight classrooms, with four classrooms representing the paper-based group, and the other four classrooms representing the computer-based group. The paper-based group and the computer-based group consist of two levels (five and six) according to the UBT curriculum and administration (see Figure 2.).

![Figure 2. Research design and procedures of the current study](Image)

Figure 2 describes the procedures of the current study. The stratified sampling was done on four sections, because of the UBT policy which favoured small classrooms sizes, of a maximum of 10 to 15 students per class. The 73 learners took a preferences survey to select the genres of the writing tasks. The top selected genres were the narrative and the opinion genres. The participants of (n=35) were in the paper-based group, who did a routine paper-based writing task (reading-based writing task: Genre: Narrative). The paper-based group (n=19) took a semi-structured interview, and the computer-based group (n=21) took a semi-structured interview.
based writing task) collaboratively. The reading-based writing, as a comprehensible input, was selected because it is recommended by one of the most pioneer universities, which is the Michigan State University (MSU). Moreover, the paper-based group wrote by using pen and paper as tools for encoding relying on the genre (N=19 narrative genre and N=16 opinion genre). On the other hand, the other participants were computer-based group (n=37) who did a reading-based writing task, by using the "QWERTY" keyboard-based writing or typing through an upgraded version of Web 2.0 tool platform which was called 'Padlet' relying on the genre (N=21 narrative genre and N=16 opinion genre). Padlet also acts as an electronic bulletin board presented in front of everyone in the classroom. All the tasks were done collaboratively to facilitate the writing procedures for the students, the teachers, and the researcher.

The data of the written tasks were analyzed by the error analysis, and the SPSS. The error analysis was done according to the UBT rubric, and filled in Excel sheets. However, the statistical tests that were selected to compare between the paper-based and the computer-based groups were the non-parametric Mann-Whitney U-tests. These tests were made because each group was fewer than 30 participants. In this case, the researcher compared between the groups statistically by the median.

After the results, an immediate action semi-structured interview was taken by the researcher. Nine students were randomly-stratified selected, and interviewed to see the learners' perceptions on the reading-writing connection, collaborative writing, and paper-based versus computer-based writing. According to Dornyei (2007), the interviews conducted in the current study was said to be semi-structured for an exploratory manner of the participants' perceptions. The interviews covered the three main questions below:

1. Do you think that writing should be connected to reading? Why/ why not?
2. Do you think that writing should be done in groups or individually? Why?
3. Do you see that writing on paper is better or writing on computer/mobile? Why?

The three questions were translated into Arabic, and all the interviews were conducted in Arabic to get more reliable answers. The questions were guided by the interviewer and elaborated to get more themes. The learners' answers were recorded, translated to English, and then transcribed. The semi-structured interviews followed the sequential design, because the items were designed after collecting quantitative data to get more insights (Creswell, 2012).

The qualitative data of semi-structured interviews were analyzed based on Content analysis. As Dornyei (2007) highlighted, semi-structured interview was done to analyze the data in content-wise. The texts were transcribed and coded according to content analysis to maintain the reliability of the themes.

6. Data Analysis and Results

6.1 The First Exploratory Comparison

6.1.1 Paper-based Group (1) Vs. Computer-based Group (1) in terms of Errors

The paper-based and computer-based groups were compared statistically to see if there was a significant difference in errors between paper-based writing and computer-based typing in the narrative genre.
The data were run through SPSS, and the independent samples Mann-Whitney U-test was selected to compare between the two groups, namely: the paper-based group (1) (paper-based writing) and the computer-based group (1) (computer-based typing). The independent variables were paper-based, and computer-based sentences, whereas the dependent variable, was errors made by the learners in each sentence.

Table 1. Mann-Whitney U-test to compare between paper-based group (1) and computer-based group (1) in terms of errors

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>176.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>407.000</td>
</tr>
<tr>
<td>Z</td>
<td>-.659</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.510</td>
</tr>
<tr>
<td>Exact Sig. [2*(1-tailed Sig.)]</td>
<td>.537a</td>
</tr>
</tbody>
</table>

In Table 1, the Mann-Whitney U Test revealed no significant difference in errors made by paper-based (Md = 1, n = 19) and computer-based writers (Md = 1, n = 21), U = 176.000, z = -.659, p = .131. This indicated that the number of lexico-grammar (meaningful clauses) produced in paper-based writing is similar to the ones made in computer-based typing (see Figure 3).

Figure 3. Box Plots to compare between paper-based group (1) and computer-based group (1) in terms of errors

6.1.2 Paper-based Group (2) Vs. Computer-based Group (2) in terms of Errors

The data were run through SPSS, and the independent samples Mann-Whitney U-test was selected to compare between two groups, namely: the paper-based group (2) (paper-based writing) and the computer-based group (2) (computer-based typing) in the opinion genre (see Table 2).

Table 2. Mann-Whitney U-test to compare between paper-based group (2) and computer-based
In Table 2, the Mann-Whitney U Test revealed a significant difference in the errors made by paper-based (Md = 4, n = 16) and computer-based writers (Md = 1, n = 16), U = 48.000, z = -3.053, p = .002, r = 0.54, large effect. This indicated that the errors made in paper-based writing were significantly more than the ones made in computer-based typing (see Figure 4).

**Figure 4.** Box Plots to compare between paper-based group (2) and computer-based group (2) in terms of errors

6.2 The Second Exploratory Comparison

6.2.1 Paper-based Group (1) Vs. Computer-based Group (1) in terms of Lexico-grammar

The data were run through SPSS, and the Mann Whitney U-test was selected to compare between the two groups, namely: the paper-based group (1) (paper-based writing) and the computer-based group (1) (computer-based typing) in terms of lexico-grammatical competence (see Table 3). The independent variables were paper-based, and computer-based sentences, whereas the dependent variable was the meaningful clauses (lexico-grammar) produced by the learners in each sentence.
Table 3. *Mann Whitney U-test to compare between paper-based group (1) and computer-based group (1) in terms of clauses*

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>Clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>158.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>389.000</td>
</tr>
<tr>
<td>Z</td>
<td>-1.511</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.131</td>
</tr>
</tbody>
</table>

a. Grouping Variable: Codes

In Table 3, the Mann-Whitney U Test revealed no significant difference in the number of the meaningful clauses produced by paper-based (Md = 2, n = 20) and computer-based writers (Md = 1, n = 21), U = 158.000, z = -1.511, p = .131, r = 0.3. This indicated that there was no significance difference between the number of the meaningful clauses produced in paper-based writing and the ones produced in computer-based typing (see Figure 5).

![Box Plots](image)

*Figure 5. Box Plots to compare between paper-based group (1) and computer-based group (1) in terms of Clauses*

6.2.2 Paper-based Group (2) Vs. Computer-based Group (2) in terms of Lexico-grammar

The data were run through SPSS, and the Mann Whitney U-test is selected to compare between two groups, namely: the paper-based group (2) (paper-based writing) and the computer-based group (2) (computer-based typing) in terms of lexico-grammatical competence (see Table 4).
Table 4. Mann Whitney U-test to compare between paper-based group (2) and computer-based group (2) in terms of clauses

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>Clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>92.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>228.000</td>
</tr>
<tr>
<td>Z</td>
<td>-1.436</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.151</td>
</tr>
<tr>
<td>Exact Sig. [2*(1-tailed Sig.)]</td>
<td>.184a</td>
</tr>
</tbody>
</table>

a. Not corrected for ties.

In Table 4, the Mann-Whitney U Test revealed no significant difference in the number of the meaningful clauses produced by paper-based (Md = 2.50, n = 20) and computer-based writers (Md = 3, n = 21), U = 92.000, z = -1.436, p = .151, r = 0.3. This indicated that the number of the meaningful clauses produced in paper-based writing were fewer than the ones produced in computer-based typing, so computer-based writers were slightly more competent in lexico-grammar (see Figure 6).

Figure 6. Box Plots to compare between paper-based group (2) and computer-based group (2) in terms of clauses

6.3 An immediate action: the semi-structured interviews

The aim of the semi-structured interview was to get more insights in order to support the quantitative data of the surveys and the reading-based writing tasks. This type of the semi-structured interviews was said to be exploratory interviews, because they were preceded by quantitative data. The learners answered all the questions accordingly. The three open-ended questions were "Do you think that writing should be connected to reading? Why/Why not?"; "Writing should be done in groups. Do you agree with this statement? Why/Why not?"; and "Writing on paper or writing by computer/mobile? Why/Why not?". The following tables describe the content analysis for the three questions as a content.

Arab World English Journal
www.awej.org
ISSN: 2229-9327
Table 5. Reading-writing connection, genre, and lexico-grammatical awareness

<table>
<thead>
<tr>
<th>Sample</th>
<th>Theme</th>
<th>Description</th>
<th>References</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratified random sampling of ELA UBT learners (n = 9)</td>
<td>Positive view of reading-writing connection</td>
<td>It has a positive effect on learners when they write, because they usually get a background about the topic they are going to write about</td>
<td>6</td>
<td>An open-ended question</td>
</tr>
<tr>
<td></td>
<td>Negative view of reading-writing connection</td>
<td>It has a negative effect on learners when they write, because they want to use their own ideas about the topic</td>
<td>4</td>
<td>An open-ended question</td>
</tr>
<tr>
<td></td>
<td>Genre awareness</td>
<td>It determines that the learners are aware of the different types of writing-reading genre</td>
<td>5</td>
<td>An open-ended question</td>
</tr>
<tr>
<td></td>
<td>Lexico-grammatical awareness</td>
<td>It determines that the learners are aware of lexico-grammatical features of the text (sentence types and clauses)</td>
<td>8</td>
<td>An open-ended question</td>
</tr>
</tbody>
</table>

Table 5 shows that six references from the nine learners view reading as an essential element in writing in ways that nourish the mind with ideas about the topic they are going to write about. However, the table shows that four negative references from the nine learners see that reading was useless in serving writing, because they felt bored, and they did not want to be restricted by ideas other than theirs. What stands out in the table was the number of references for genre awareness. Five references from the nine learners were aware of the writing genre, as they mentioned that they would regard the reading-writing connection as dependent on the genre. In other words, they mentioned that if the writing genre was informative, then they would regard reading as essential before writing. However, if the writing genre was opinion, then, they will see that there was no need to read before writing. What can be seen in the table was the dramatic increase in the references of lexico-grammatical awareness, which is eight references from the nine learners.
learners have shown that they are aware of the lexico-grammatical features of the text, because they mentioned that there is a variety in sentences, namely: complex, compound, and simple. This indicates that they were aware of using clauses in sentence-level writing.

Table 6. Collaborative writing

<table>
<thead>
<tr>
<th>Sample</th>
<th>Theme</th>
<th>Description</th>
<th>References</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratified random sampling of ELA UBT learners (n = 9)</td>
<td>Positive view of collaborative writing</td>
<td>It has a positive effect on learners when they write, because they usually get more ideas about the topic they are going to write about</td>
<td>3</td>
<td>An open-ended question</td>
</tr>
<tr>
<td></td>
<td>Negative view of collaborative writing</td>
<td>It has a negative effect on learners when they see that they are not going to learn and it will be time consuming</td>
<td>6</td>
<td>An open-ended question</td>
</tr>
</tbody>
</table>

Table 6 shows that three references from the nine learners saw that collaborative writing was useful because it opened views to other colleagues' minds and ideas about the topic they were writing about. However, six references from the nine learners revealed that they were not advocates of collaborative writing, because they were not going to learn effectively. Also, the increasingly negative view of collaborative writing results from the perception that producing a text collaboratively will take more time and more efforts to keep it as neat as possible.

Table 7. Paper-based writing (PB) vs. computer-based typing (CB)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Theme</th>
<th>Description</th>
<th>References</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratified random sampling of ELA UBT learners (n = 9)</td>
<td>Advocates of computer-based writing</td>
<td>It determines that the learners feel more comfortable when they type by using the keyboard</td>
<td>5</td>
<td>An open-ended question</td>
</tr>
</tbody>
</table>
The learners' errors were higher in the paper-based groups, and the computer-based groups were more competent. Most of the learners added that computer-based typing was easier and more flexible than the paper-based, because the former reduced the errors in their texts. However, the learners' lexico-grammatical competence (meaningful clauses) production was similar in both computer-based writing and paper-based writing because lexico-grammatical competence was already fixed in the participants' mind. Therefore, the learners' competence in both the opinion and the narrative genres were similar.

7. Discussion

7.1 Is there a difference in errors between PB and CB writing groups?

The first exploratory study showed that the computer-based group made fewer errors that the paper-based group, so the computer-based writers were more competent. This finding was similar to one of the previous comparative studies that indicated that L2 learners get higher scores in computer-based tasks than the paper-based tasks (Lee 2004). From the semi-structured interviews, most of the learners commented that they favour the computer-based typing, and consider it much easier than the paper-based writing, because the former has artificial intelligence, which has various features, such as auto-correction, and smart prediction.
However, the first exploratory study for the other groups was not significant. This contradicts with one of the previous comparative studies where L2 learners tend to get higher scores in writing through computer-based tasks than the paper-based tasks as Lee. (2004) pointed out. This might be resulted from the low difficulty level of the opinion genre, and its flexibility with the learners' expressions of themselves. The interviews showed that the learners were highly aware of genre, as they stated, that the number of errors increases depending on the genre's difficulty, and the collaboration itself. Since that collaborative writing was viewed negatively by most of the learners, it might be the reason behind the high number of errors in paper-based writing. This is because paper-based writing does not have collaborative features like the computer-based Web 2.0 tools that are collaborative platforms that are designed for collaborative manners.

7.2 Is there a difference in clauses (lexico-grammar) between PB and CB writing groups?

As far as lexico-grammatical competence in the writing tasks of the learners is concerned, error analysis reveals many interesting findings. Since connecting meaning to grammar "dictogloss" is vital to serving the communicative competence of the learners in different genres of writing texts (Frodesen, 2018; Mayo, 2018), the number of essential clauses indicated the lexico-grammatical competence in the current study. Moreover, lexico-grammar was an independent faculty in the second language that consists of a positive correlation between grammatical and lexical items (Larsen-Freeman, 2009). The clause was the fundamental constituent of lexico-grammatical competence (Halliday, 2004), so the meaningful clauses produced by the learners were highlighted to indicate their lexico-grammatical competence. The number of the meaningful clauses (lexico-grammar) in comparison between the paper-based group (1) was more when compared it to the computer-based group (1) in the narrative genre. However, the number of the meaningful clauses produced by the paper-based group (2) were less when compared them to the computer-based group (2) in the opinion genre. The learners of both groups showed no difference in the lexico-grammatical competence, because competence was already fixed in the minds of the learners, and technology will not enhance it in writing. The current study fills the gap in the literature of studying the lexico-grammatical features in paper-based writing and computer-based typing. Competence and ideas were stable whether on papers or on computers. Both methods do not affect the lexico-grammatical competence through performance.

8. Conclusion

Thus far, this paper has answered the two research questions, namely "Is there a difference in errors between PB and CB writing groups?"; and "Is there a difference in clauses (lexico-grammar) between PB and CB writing groups?". Both of the research questions were answered by the Mann-Whitney U-tests, and supported by qualitative data of the semi-structured interviews. The results can be summarized as follows:

1. The learners' errors on paper-based writing were more than on computer-based typing, because the latter has the artificial features
2. The learners' lexico-grammatical competence and clauses production were similar in both computer-based writing and paper-based writing because lexico-grammatical competence was already fixed in the participants' mind
3. Most of the learners were aware of the reading-writing connection, genre, and lexico-grammar

In summary, the UBT learners were in need of increasing their literacy skills by adapting
context-relevant teaching methods that encourage them to write freely without anxiety. The Saudi learners do not only need to be given feedback, but they also need error analysis behind the scenes to be understood from the perspective of communicative competence. Since the advent of new technology, Saudi learners had to tackle the different writing genres with different tools of learning, mainly, computer-based typing alongside paper-based writing.

9. Implications for Future Research and Recommendations

9.1 Implications for the Saudi novice writer

Further research needs to do other genres than narrative and opinion genres. Other research may also look at other types of writing rather than collaborative writing. Reading different genres in the English language, and to pay attention to the text genre, style, and lexico-grammar are vital. Moreover, being autonomous in finding external resources additional to the course book, as in journals and encyclopedias is also vital. Learners should think outside the box, and never get restricted to others' thoughts and ideologies, with awareness of the pure Islamic borders (Shukri, 2014). Furthermore, learners should adapt with new technology in writing in addition to the traditional paper-based one. To encourage others to collaborate as an initial way of learning, until they reach Vygotsky's (1978) Zone of Proximal Development (ZPD).

9.2 Implications for the Saudi EFL writing teacher and English language institute

Teachers should encourage reading before writing tasks, and to develop writing assessment through reading-based tasks that imitate the writing assessment of the University of Michigan (MSU). They have to adopt rubrics that are specified for each writing genre in the curriculum, as done in the University of Business and Technology (UBT), which increases the scoring validity of the writing assessment (see appendices). The English institutions have to include writing mandatory workshops once a week in the teaching syllabus, and to select context-relevant topics for writing.

Acknowledgement

We acknowledge the University of Business and Technology (UBT) for their warm welcoming for giving us the chance to collect data from their English Language Academy (ELA) learners.

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https://orcid.org/0000-0002-1122-1111
References


pp. 18-29). Hoboken, USA: John Wiley & Sons, Inc.


**Appendix**

Appendix A. The UBT Correction Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
<th>Example of Error</th>
<th>Corrected Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>punctuation</td>
<td>I live, and go to school here. Where do you work?</td>
<td>I live and go to school here. Where do you work?</td>
</tr>
<tr>
<td>a</td>
<td>missing word</td>
<td>I working in a restaurant,</td>
<td>I am working in a restaurant.</td>
</tr>
<tr>
<td>cap</td>
<td>capitalization</td>
<td>It is located at Main and Baker streets in the city.</td>
<td>It is located at Main and Baker streets in the city.</td>
</tr>
<tr>
<td>vt</td>
<td>verb tense</td>
<td>I never work as a cashier until I got a job there.</td>
<td>I had never worked as a cashier until I got a job there.</td>
</tr>
<tr>
<td>s/v agr</td>
<td>subject-verb agreement</td>
<td>The manager works hard.</td>
<td>The manager works hard.</td>
</tr>
<tr>
<td>sp</td>
<td>spelling</td>
<td>The manager is a woman.</td>
<td>The manager is a woman.</td>
</tr>
<tr>
<td>sing/pl</td>
<td>singular or plural</td>
<td>She treats her employees like slaves.</td>
<td>She treats her employees like slaves.</td>
</tr>
<tr>
<td>u/w</td>
<td>unnecessary word</td>
<td>My boss watches everyone all the time.</td>
<td>My boss watches everyone all the time.</td>
</tr>
<tr>
<td>wf</td>
<td>wrong word form</td>
<td>Her voice is irritating.</td>
<td>Her voice is irritating.</td>
</tr>
<tr>
<td>ww</td>
<td>wrong word</td>
<td>The food is delicious. Besides, the restaurant is always crowded.</td>
<td>The food is delicious. Therefore, the restaurant is always crowded.</td>
</tr>
<tr>
<td>wo or</td>
<td>wrong word order</td>
<td>Friday/always is our busiest night.</td>
<td>Friday is always our busiest night.</td>
</tr>
</tbody>
</table>
Appendix B. The UBT Narrative Paragraph Writing Rubric

<table>
<thead>
<tr>
<th>NARRATIVE PARAGRAPH (30 pts)</th>
<th>Exceptional /5 pts</th>
<th>Skilled /4 pts</th>
<th>Proficient /3 pts</th>
<th>Developing /2 pts</th>
<th>Inadequate /1 pt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content/ Ideas</td>
<td>The topic sentence clearly states the experience or event and its significance. All ideas in the paragraph directly support the topic sentence. Intriguing concluding sentence.</td>
<td>The topic sentence somehow states the experience or event but it does not express its significance. Most ideas directly support topic sentence. Strong concluding sentence.</td>
<td>The topic sentence is just an announcement. It does not express the significance of the story. Some ideas support topic sentence. Adequate concluding sentence.</td>
<td>Weak topic sentence. Few ideas support topic sentence. Weak concluding sentence.</td>
<td>No topic sentence. Ideas don't support topic sentence. No concluding sentence.</td>
</tr>
<tr>
<td>Proof of Narration</td>
<td>A story line is evident and clearly connected to the topic.</td>
<td>A partial story line is evident and is connected to the topic.</td>
<td>A weak story line is evident and is somewhat connected to the topic.</td>
<td>An attempt of a story line is evident, but it is not connected to the topic.</td>
<td>A story line is not evident.</td>
</tr>
<tr>
<td>Organization</td>
<td>Paragraph has good organization, events are time ordered, and there is sharp sense of beginning and end. Correct time order transition words/phrases are used.</td>
<td>Paragraph is organized, but events somewhat jump around. Time order transition words/phrases are used, but they lack variety.</td>
<td>Paragraph is somewhat organized, but events jump around. Start and end are somewhat unclear. Some time order transition words/phrases are used.</td>
<td>Weak paragraph organization. Events jump around. Start and end are unclear. Time order transition words/phrases are not always evident.</td>
<td>Paragraph is not organized, and events don't make sense. No use of time order transition words/phrases.</td>
</tr>
<tr>
<td>Word Choice</td>
<td>Variety of strong verbs and vivid adjectives. Strong vocabulary. Words enhance ideas.</td>
<td>Strong verbs and good adjectives are used. There is some variety in vocabulary.</td>
<td>Limited word choice; some attempt to use descriptive words.</td>
<td>Limited and inappropriate word choice. Little attempt at using descriptive words.</td>
<td>Serious vocabulary deficiency. No attempt at using descriptive words.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content/ Ideas</td>
<td>/5</td>
</tr>
<tr>
<td>Proof of Narration</td>
<td>/5</td>
</tr>
<tr>
<td>Organization</td>
<td>/5</td>
</tr>
<tr>
<td>Word Choice</td>
<td>/5</td>
</tr>
<tr>
<td>Sentence Structure/ Mechanics</td>
<td>/5</td>
</tr>
<tr>
<td>Format/ Neatness</td>
<td>/5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>/30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Points</th>
<th>Percentage</th>
<th>Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.8 – 30</td>
<td>90 – 100 %</td>
<td>Exceptional (A)</td>
</tr>
<tr>
<td>24 – 26.7</td>
<td>80 – 89 %</td>
<td>Skilled (B)</td>
</tr>
<tr>
<td>21 – 23.7</td>
<td>70 - 79 %</td>
<td>Proficient (C)</td>
</tr>
<tr>
<td>19.5 – 20.5</td>
<td>65 - 69 %</td>
<td>Developing (D)</td>
</tr>
<tr>
<td>0 – 19.4</td>
<td>0 - 64 %</td>
<td>Inadequate (F)</td>
</tr>
</tbody>
</table>
### Appendix C. The UBT opinion Paragraph Writing Rubric

<table>
<thead>
<tr>
<th>OPINION PARAGRAPH (30 pts)</th>
<th>Exceptional (5 pts)</th>
<th>Skilled (4 pts)</th>
<th>Proficient (3 pts)</th>
<th>Developing (2 pts)</th>
<th>Inadequate (1 pt)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic Sentence &amp; Concluding Sentence</strong></td>
<td>Topic sentence is stated in a complete sentence and fully expresses an opinion about the topic. Strong concluding sentence.</td>
<td>Topic sentence is stated in a complete sentence and somewhat expresses an opinion about the topic. Good concluding sentence.</td>
<td>Adequate topic sentence. Adequate concluding sentence.</td>
<td>Topic is not stated in a complete sentence, and does not express an opinion. Weak concluding sentence.</td>
<td>No topic sentence and/or no opinion. No concluding sentence.</td>
</tr>
<tr>
<td><strong>Supporting Reasons</strong></td>
<td>All ideas in the paragraph directly support the topic sentence. At least three different supporting reasons are given.</td>
<td>Most ideas directly support topic sentence. Contains some specific reasons to support opinion.</td>
<td>Contains some supporting ideas, but few specific reasons to support opinion.</td>
<td>Contains very few supporting ideas and few specific reasons to support opinion.</td>
<td>Contains no supporting ideas and no specific reasons to support opinion.</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>Logical sequence is clear to the reader. The sentences and transitions are well structured. The paragraph is easy to read.</td>
<td>Logical sequence is clear to the reader. However, transitions lack variety.</td>
<td>Sequence is not clear to the reader. The paragraph is confusing to read and has limited use of transitions.</td>
<td>Sequence is disjointed. Ideas are not well-organized. The paragraph is hard to read and understand.</td>
<td>There is no apparent organization. There are no transitions.</td>
</tr>
<tr>
<td><strong>Word Choice</strong></td>
<td>Variety of strong verbs and vivid adjectives. Strong vocabulary. Words enhance ideas.</td>
<td>Strong verbs and good adjectives are used. There is some variety in vocabulary.</td>
<td>Limited word choice; some attempt to use varied words and phrases.</td>
<td>Limited and inappropriate word choice. Little attempt at using varied words and phrases.</td>
<td>Serious vocabulary deficiency. No attempt at using varied words and phrases.</td>
</tr>
<tr>
<td><strong>Sentence Structure &amp; Mechanics</strong></td>
<td>Clear, correct, flowing sentences. There aren't any spelling or grammatical mistakes. The title is included and the paragraph is indented.</td>
<td>Generally clear, correct sentences with minor errors. There are some spelling and grammatical mistakes. The title is included and the paragraph is indented.</td>
<td>Sentence structure errors occasionally making writing unclear. There are several spelling and grammatical mistakes. The title is not included and/or the paragraph is not indented.</td>
<td>Several serious errors. It is difficult to read and understand the paragraph. There is no evidence of editing.</td>
<td>Many serious errors.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Criteria</strong></th>
<th><strong>Points</strong></th>
<th><strong>Points</strong></th>
<th><strong>Percentage</strong></th>
<th><strong>Descriptors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Sentence &amp; Concluding Sentence</td>
<td>/5</td>
<td>26.8 – 30</td>
<td>90 – 100 %</td>
<td>Exceptional (A)</td>
</tr>
<tr>
<td>Supporting Reasons</td>
<td>/5</td>
<td>24 – 26.7</td>
<td>80 – 89 %</td>
<td>Skilled (B)</td>
</tr>
<tr>
<td>Organization</td>
<td>/5</td>
<td>21 – 23.7</td>
<td>70 - 79 %</td>
<td>Proficient (C)</td>
</tr>
<tr>
<td>Word Choice</td>
<td>/5</td>
<td>19.5 – 20.5</td>
<td>65 - 69 %</td>
<td>Developing (D)</td>
</tr>
<tr>
<td>Sentence Structure/ Mechanics</td>
<td>/5</td>
<td>0 – 19.4</td>
<td>0 - 64 %</td>
<td>Inadequate (F)</td>
</tr>
<tr>
<td>Format/ Neatness</td>
<td>/5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>/30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Implications of Online Translation Courses on Instructors’ Philosophy of Teaching

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Abstract
The paper aims to shed more insights into the impact of online learning on the philosophy of teaching online translation courses. It starts from the premise that online translation courses have peculiar epistemological and pedagogical characteristics which differ from those available in conventional teaching settings. The traditional styles of teaching translation courses have generally focused on linguistic competence and translation and interpreting skills with a little focus on the increasing demands and changing conditions of the translation industry. In spite of the effectiveness of online translation courses in addressing the needs of both translation students and labor market in terms of offering diverse programs and courses including computer-assisted translation tools, subtitling, document management, and localization software, different challenges remain unresolved. These challenges can be attributed to different factors including the lack of a reliable philosophy of teaching that addresses the peculiar epistemological and pedagogical characteristics of online learning. In order to explore the role of philosophy of teaching in the effectiveness and quality of online translation courses, twenty seven online instructors were interviewed about their philosophy of teaching and strategies of addressing the online learning problems and challenges. It is suggested that instructors’ unawareness about the peculiar nature of online learning and learners’ needs has negative implications on students’ achievement and online learning process in general. Online translation instructors are thus recommended to integrate different teaching philosophies in order to improve interaction with students, better understand their needs, and prepare them for the translation industry and labor market.

Key words: e-learning, online translation courses, pedagogy, teaching philosophy

1. Introduction
This paper aims to discuss the impact of online learning on the philosophy of teaching online translation courses. Given the importance of philosophy of teaching for effective and meaningful learning, this study starts from the goal that online translation instructors need to have a clear philosophy of teaching for effective online teaching. To date, however, there is no explicit review of academic literature that addresses the issue of the impact of online environment on philosophy of teaching. The peculiar nature of online learning and how it can affect and be affected by teaching philosophies have not been adequately studied yet. In relation to online translation courses, a very little effort has been done to improve learners’ performance and achievement. Discussions are generally more concerned with addressing the challenges and limitations of online learning and the ways of addressing them.

There is a slight focus on online translation instruction and learning in spite of the increasing popularity and importance of online translation courses over the last 10 years. In this regard, it is assumed that both professionals and academics need to better understand the opportunities of online learning, the responsibilities of instructors in these contexts, and how these issues can be administrated by reliable teaching philosophies for a successful learning process. As such, this paper investigates the issue of the appropriateness of teaching philosophies to online learning in general and online translation courses in particular. It explores how the online translation instructors can improve their teaching performance and practices by means of selecting a reliable philosophy of teaching that enables them to better understand the conceptual issues of online learning and the changing needs of translation learners, labor market, and translation industry, on the one hand and adapting it to address the challenges and problems of online learning, on the other hand.

2. Statement of the problem
The recent years have witnessed an increase in the popularity of online translation courses mainly due to the idea that these courses are usually flexible and convenient for learners. Furthermore, such courses address some professional gaps that are not considered in conventional academic settings. The traditional teaching styles of translation courses have generally focused on linguistic competence and skills of translation and interpreting and translation criteria. However, with the advent of the Internet and the advances in technology, employers and clients are more interested in recruiting translators who are well trained and experienced with new skills including document management, localization software, subtitling, and automated translation. The increasing changes in translation industry and labor market have made it important to integrate technology in teaching translation and changing the methods of delivering translation courses.

In so doing, different professional institutions are concerned with teaching, training, and preparing translators for the job market through online courses that take into consideration some closely related issues to translation industry such as project management, information network, language engineering, terminology, working in a large team and cross-cultural communication. As an example, Proz. Com offers different training programs for translation students and professionals such as business of translation and interpreting, translation project skills, services and specialization, SDL Trados training, and translation software and tools. They use different delivery formats including on-demand courses, self-study training, one-on-one (individualized) training,
webinar presentations, and online training where small group training is conducted in real-time in a virtual classroom environment.

In spite of the increasing popularity and effectiveness of such courses in addressing the needs of learners and translation industry, different challenges remain unresolved, which may have negative impact on the effectiveness of the learning process and learners’ achievement. One main reason can be attributed to the global nature of online learning where learners usually come from different backgrounds such as age, sex, ethnicity, and even linguistic background. This requires instructors to adapt different pedagogical methods drawn from different philosophies of teaching. The adapted philosophies of teaching should consider the peculiar nature of online learning and how different it is from traditional or conventional teaching. It should also address the problematic issues arising from online learning ranged from psychological barriers, intellectual barriers, cultural barriers, cognitive barriers, education barriers, technical barriers to linguistic barriers. It is the responsibility of instructors thus to think about the methods by which they can assure students’ learning outcomes, improve online learning environment, enhance communication and interaction with students, and motivate them to learn especially in the absence of face-to-face instruction. The hypothesis is that a clear philosophy of teaching is constituted in relation to these issues. In addition, a major problem, however, is that much of the online instruction in online translation courses is based on lecturing. In the face of this problem, this study is concerned with exploring the ways of preparing translation instructors for effective online learning through adapting reliable philosophies of teaching.

3. Theoretical Background and Definitions
Clark and Mayer (2008) believe that e-learning can be defined as “instruction delivered on a digital device such as a computer or mobile device that is intended to support learning” (p.8). The idea of e-learning was first introduced in 1960 by Stanford University. E-learning is asynchronous in nature. In other words, it is pre-recorded and it is available to the students at any time, regardless of their location (Rosenberg, 2001). However, with the advances in telecommunication technology, Welsh, Wanberg, Brown, and Simmering (2003) state that e-learning has recently become dominated by synchronous e-learning, or e-learning that is “live and that requires all learners to be in front of their computers at the same time” (p.247). According to Weller, (2007) e-learning is based on two major approaches: the first is based on online connections between instructor and students and the other is based on direct connections with resources, as material is recorded. Kop (2011) explains that “these two distinct streams show a different emphasis: the first one has communication and interaction between people at the heart of learning, and the second focuses on engagement with resources” (p. 19).

The applications of e-learning have recently become widely spread and available at many education institutions across the world. Kidd (2009) explains that the idea of e-learning in education institutions is mainly based on the application of software programs and online learning courses. In this way, Zaharias and Poylymenakou (2009,) stress that “electronic learning (e-learning) has been identified as an enabler for people and organizations to keep up with changes in the global economy” (p.76). Zahm (2004) notes that computer based learning programs use different media such CD-ROM, internet, interconnected computed technologies, Web-downloads, and multi-media technologies. While this definition seems to be interesting but broad, the current
The article focuses on translation courses delivered via Internet technology and the role of the instructor in delivering these online courses and how he could adapt his teaching philosophy to be consistent with the environment of the online courses and the characteristics of learners.

Pym (2003) points out that e-learning (the pedagogical use of electronic means of communication) is considered to be of great importance and interest in the training of translators. It is closely related to open and distance learning and uses electronic tools in training at all levels. Translation material, data, and courses are uploaded to the system to be accessible to a huge number of learners. Instructors may play the role of facilitator or are totally absent from the teaching process. The course material is available online where learners can choose their tools; threaded discussions in Moodle, blog posts, and synchronous online meetings. The digital platforms like blogs, social media networking sites are available to the learners and connect them with content and with other learners to build knowledge. This draws our attention to the role of the instructor and learners in the online courses of translation. The online translation course incorporates online English dictionaries that equip translators with necessary online sources such as thesauruses and diachronic study of words and familiarize them with denotations and connotations, synonymy and antonymy, hyponym, metonymy, homonym, and so on (Aldosari & Mekheimer, 2010; Ballesteros & Croft, 1997; Honglan, 2005; Hull & Grefenstette, 1996; Koren, 1997; Provaznikova, 2009).

4. Literature review
Numerous studies have investigated the challenges and difficulties of e-learning as well as the ways by which the quality and effectiveness of e-learning can be improved; however, very little effort has been done in relation to the implications of online translation courses on the teaching philosophy. That is to say, the peculiar characteristics of online translation courses and their implications on adapting a teaching philosophy have not been thoroughly studied. Therefore, this section is mainly concerned with critically reviewing literatures which are mainly focused on the relationship between the pedagogical and epistemological structure of online courses of translation and the idea of adapting a relevant teaching philosophy. The previous studies address different types of barriers encountered by learners of the online courses of translation. Pym (2003) states that e-learning includes an array of problematic issues such as students' distress, attrition, declining motivation, heterogeneous learning needs, and high resource investments. These problems are also asserted by Herrington, Reeves, and Oliver (2010) as they discuss the problems and points of weaknesses that result from the e-learning appeared in the high cost of the authentic e-learning environment and its time-consuming nature that require stimulations with multiple possible outcomes. That is to say, e-learning includes a wide spectrum of problems that can affect adversely the teaching philosophy.

Lai, Rana, and Rajiv (2014) observe that e-learning environment “generates new relationships between learner and computer and also forms a new learning community” (p. 21). E-learning has recently witnessed diversity of learners, technological advances and dramatic changes in learning process and learning tasks, which pose significant challenges for both learners and instructors. E-learning environment is usually compared to the classroom environment in terms of students' interaction and socialization inside classroom, competition among peers, motivation, and face to face encounters and so on. Unfortunately, e-learning environment often
dismisses these elements. Despite the study has highlighted the problems implicit in the idea of creating new communities, it has not provided alternative solutions for addressing the problems emerging from these new environments. Zaharias and Poulomenakou (2009) believe that “identifying whom the users are and what the tasks are in an e-learning context impose extra difficulties” (p.76). The task being entitled to the users of e-learning is best described as abstract in nature (Zaharias & Poulomenakou, 2006). As such, it is difficult to judge the usability of e-learning design, since it is controlled by the pedagogical values which are different from users to users. The users’ learning skills are different and controlled by variables other than their ability to effectively use online courses. In this regard, Liu (2015) asserts that It is fundamental that a translator is capable of using modern information and communication technologies (p. 130).

This requires the intervention of the instructor, as he should adjust his teaching philosophy to be compatible with the transformative nature of e-learning and the heterogeneity of learners. The pedagogical value of e-learning should be the responsibility of the instructor rather than the learner. Instructors have to be fully aware of the problems arising from the usability of e-learning design. An e-learning application can be usable; it cannot, however, be used pedagogically (Albion, 1999; Quinn, 1996; Squires & Preece, 1999). Therefore, instructors of online translation courses should familiarize themselves with the requirements of e-learning environments, the convenient learning styles, psychological nature of students who joined e-learning courses, the material design, and lack of learners' physical presence.

In other words, teaching philosophy should be largely consistent with the requirements of e-learning and the underlying differences among learners. According to Goldi (2016), “Educators adapting to new learning environments may turn to learning theories to guide them. If existing theories no longer fully or only partially explain learning in these contexts new theories need to be developed”(p.1). The salient effect of e-learning on students appears in the psychological barriers, the repercussion of which is represented in students' distress and attrition: students may undergo certain kinds of technological problems which cause them to be distressful particularly at the very beginning of using these courses. In addition, “conservative elements of the society see the Internet as a danger to societal norms because of its unethical content” (Alebaikan & Troudi, 2010, p. 55). Betts (2009) remarks that e-learning deprives students from the real–life classroom environment and denied them a real-life interaction with both their peers and instructors, since everyone is confined to his own computer. The most affected ones are those shy students who are not courageous enough to raise questions and to start making dialogue with their instructors. This isolated environment does not give the instructor an opportunity to expose such a category of shy students. In addition, such a type of distance learning would inevitably cause some problems in communication. In other words, it may represent a barrier toward an effective communication, which results in “the misinterpretation or communication breakdown of the message or stimuli between the sender/receiver and the receiver/sender”(Betts, 2009, p. 3). This lack of effective communication would have its repercussion on the students who are less motivated, as they will be also adversely affected by e-learning due to the lack of learners' physical presence. “It may be challenging for Saudi universities to get students to adapt to the use of new learning strategies when they have been used to the traditional didactic, lecture-based classroom”(Alebaikan & Troudi, 2010, p. 55).
In e-learning environments, students may suffer from lack of physical communication, the lack of body language, the lack of face to face contact that may hinder linguistic, psychological and social communication with their instructors. To put it in another way, the important and suggestive messages, body language messages, eye-contact messages, and abstract messages can be lost due to these barriers. Betts (2009) believes that the lost-in-translation communication phenomenon may lead to a negative effect on online education, which is associated with student attrition. Betts (2009) writes:

Data collected from Drexel University’s MSHE Program during the Program’s first academic year revealed that 12% of the students who opted to leave/withdraw based their decision on their experience with the online instructor citing poor communication (p. 3).

The competition among peers in virtual classrooms is kept to minimum due to the isolated nature of the virtual classrooms. The mere idea of attending actual classroom is a major source of motivation for the students. Despite the fact that e-learning is considered to be one of the fastest organizational uses of the Internet, there is an increasing rate of students’ dropout in most e-learning programs when compared with traditional instructor-led courses. The high dropout rate is largely based on students’ lack of motivation or they cannot continue their studies with similar rates of motivation. Despite the fact that these studies address the problems resulting from e-learning, they do not suggest either directly or indirectly a teaching philosophy that can handle these issues, nor do they address how these pedagogical, technological and epistemological issues can be sorted out by the instructors.

5. Methodology
This study is based on a qualitative research design examining the experiences of online translation instructors. Data were collected through interviewing twenty-seven instructors who teach online translation courses. Eight open-ended questions were asked in order to explore the instructors’ opinions and experiences about online translation courses. These included questions related to their opinions about the essence and goals of online education; the needs of online learners, the role and responsibilities of online instructors; the changes online education has brought to translation instruction and learning, their preferred teaching activities and methods (e.g. lecturing, interactive lecturing, question-answer using clickers/personal responses system, whole group discussions, small-group student discussions, brainstorming, student peer teaching, etc.); the assignment types for the assessment of their students; and the impact of online environment on student learning. They were also asked whether they adopt particular strategies in order to address the online learning challenges as well as learners’ needs, and whether they adopt a particular philosophy of teaching and if so how they translate it from theory to practice.

Qualitative analysis is appropriate for the purpose of the study, as it is suited for exploring people’s attitudes, opinions, beliefs, perceptions, interactions and behaviors in various settings and where the approach is interpretative and the data are presented subjectively rather than statistically (Creswell, 2013; Yin, 2014). Furthermore, qualitative analysis enables researchers to seek an in-depth understanding of a particular entity, individual or event at a specific time, with a focus on a particular unit of analysis (Creswell, 2009, 2013). In order to investigate the implications of online learning on adapting a philosophy of teaching, this study has conducted an open-ended interview.
with 27 online translation instructors. The rationale of the study rests upon the idea that interviewing is not only appropriate for collecting information on the ways instructors address the inherent challenges and problems of online learning, but also suitable for getting an in-depth analysis of their attitudes toward the importance of adapting a philosophy of teaching to online learning. Such are important for proposing practical steps for improving the quality of translation instructors’ performance as well as the quality and effectiveness of online translation learning.

6. Analysis and Discussion
The majority of instructors of online translation courses who were interviewed state that the idea of incorporating the multiple sources of information technology into teaching translation courses has become both intellectual and cognitive necessity for both instructors and learners, since these sources give learners an access to online professional groups and specialized sites in translation, online dictionaries, databases and so on. They also added that this environment has become pedagogically essential for teaching translation courses. The majority of their responses have shown that they were unaware of the importance of adopting an explicit teaching philosophy for online courses because they are influenced by various factors such as environment, personal beliefs, their experience in teaching translation courses and practice. In addition, their answers have shown that in spite of their relative lack of awareness of the peculiar nature of online teaching environment, the none-physical presence of learners, learners' lack of motivation, psychological distress of learners, cultural, ideological, social and even linguistic differences among learners, they have not taken into account their impact on the teaching process nor have they considered the significance of adapting a teaching philosophy consistent with the requirements of the online teaching environment. The majority of their responses have asserted that they have not followed a definite or unified teaching strategy while teaching online courses of translation.

The response of the majority of the interviewed instructors have asserted that the idea of adapting an explicit or well-defined philosophy in teaching online courses of translation pays no dividend without an institutional effort, the role of which is to help implement the adapted philosophy of teaching online courses in translation. In other words, the teaching philosophy has to be tailored to be consistent with, on one hand, ideological, cultural, social and even political characteristics of learners and with the objectives and potentialities of the institution, on the other hand. It seems to be clear that the instructors of online teaching courses of translation are burdened with a heavy duty in the online teaching process, which is not only limited to deliver knowledge to learners but also to train them on making the best use of online sources. For example, an online instructor may help learners select the most appropriate material for their studies in translation. A teacher's role is no longer confined to the traditional methods and styles of teaching that focus on the textbook. Teaching philosophy, however, is adapted to create self-directed learners who are self-independent seekers of knowledge rather than receivers. Their responses have proved that the idea of using online sources and e-learning environment would help improve the process of teaching translation courses in many ways, simply because translation industry has become digitalized.

The idea of adapting a teaching philosophy has become essential and perquisite for teaching online translation courses. However, it is a difficult to adopt a certain teaching philosophy for such online courses due to the ever-developed nature of the technological tools incorporated
into these courses, the requirements of which cannot be satisfied by resorting to only one philosophy. Different philosophies of education have been developed over the years. A philosophy of education can be simply defined as the ways educators approach the study of education with their students that promotes a unique vision of education (Barrow & Woods, 2006). In academic terms, Noddings (2007) outlines that a philosophy of education is “the philosophical study of education and its problems...its central subject matter is education, and its methods are those of philosophy” (p. 1). The technological advances are changeable and transformative that result into permanent changes in the online learning. This view has been supported by Bates (2017) as he reports that technological advances have completely changed learning settings and encouraged the widespread of e-learning environments. This highly accelerated movement of the online learning is faced with a very slow movement in the conventional education. As such, this imbalanced relationship between online learning and conventional education has dramatically affected the teaching philosophy and has made the philosophy of teaching online courses a liquid and flexible in order to be consistent with the metamorphosing nature of the technology of education. Therefore, the idea of online education philosophy requires a kind of adaptation rather adoption. In other words, instructors have to adapt the teaching philosophies used in the conventional education to the renewed characteristics of the online courses.

The core pedagogical concept in teaching online translation courses is to train students to be translators working in real-life environment, where they can make use of their theoretical knowledge to their vocational careers, which is endorsed by progressivism philosophy of teaching (Hayes, 2006; Wang, 2012; Winick, 1978). Progressivism is a student-centered educational philosophy grounded in understanding the idea that human beings acquire information most successfully from real-life experiences. In addition, e-learning courses may mitigate the tutor’s authority imposed directly upon the students in their classrooms, as the students may have a relative freedom in choosing their learning sources and tend to be more self-directed learners rather than being dependent learners. In this way, progressivism can be partly convenient to the needs of e-learning environment where students are independent learners. The aspect of democracy in this teaching philosophy gives learners the right to shape their knowledge and choose their material independently under the supervision of their tutor, not through the authorial position of their tutor. Translation industry has recently tended to be digitalized and most sources of knowledge and data used by translators are taken from Internet and online dictionaries. As such, e-learning provides learners with a space of freedom in searching for data and distinguishing between valid and invalid sources. It opens multitude of sources for learners, and focuses their attention on stimulating their skills of critical thinking and creativity via bridging up the gap between online information and real-life. E-learning is in a dire need for critical thinking. In this sense, the philosophy of progressivism is pivotal, as it regards the process of knowledge acquisition developed and accumulative, based mainly on the skill of learners to know, understand, evaluate and apply knowledge. The instructor should address the needs of his students from such a perspective. As such, the idea of progressivism is largely consistent with the ever-developed nature of technology of education. That is to say, providing students with the skills of critical thinking should represent the core of teaching philosophy through which learners are trained to be selective and critical when searching for knowledge available in the web and distinguish useful and important knowledge from unimportant knowledge that has little to do with their study. As a result, the skills of critical thinking should represent a major part of the adapted teaching philosophy used for online teaching.
The online translation courses lack the physical presence of the learners that sharply affect the physical and even the mental communications between learners and their instructors. As such, the social constructivist theories of learning can address the problems of lack of academic socialisation in the e-learning courses through incorporating teaching strategies that require learners to collaborate, communicate, explore, and reflect (Uskov, Howlett, & Jain, 2015). In this domain, language learning is regarded to be an active and constructive process where learners are able to develop their language skills in relation to the surrounding environment. It can be suggested then that constructivist approaches are appropriate for e-learning systems, which is also held by Rane and Sasikumar (2007) as they observe that constructivist learning approaches are now widely used within virtual learning communities and new online systems, which are referred to as intelligent online systems in contrast to traditional e-learning systems. Accordingly, the instructors have to incorporate the principles of the constructivist learning approach into their teaching philosophy in order to address the problems resulting from the lack presence of the students of the online translation courses.

The technological advances would increase the effectiveness of teachers. The new Internet-connected world has increased the chances for teaching and learning and has turned the instructor into a facilitator. This view is also held by Pushpanathan (2012). Within e-learning environments, Pushpanathan adds, an instructor is entitled to be a facilitator. The facilitator’s role is clearly reflected in creating effective communication, since students infrequently come to the campus. As face-to-face communication is lost, Betts (2009) requires administrators to “integrate communication theory and methods into training and professional development for online faculty” (p. 3). Therefore, a part of the adapted teaching philosophy for online courses is that instructors should perceive their roles as facilitators. One of the important aspects that exercise a considerable role in defining the role of teachers and students in e-learning environments is teachers’ and students’ perceptions of e-learning. Generally, face-to-face learning environments are very effective in addressing individual differences among students. However, e-learning environments are useful in relation to time management and flexibility. “Teaching model for learning specialized translation may be classified as a model of professional training experience distribution” (Baker & Maier, 2011). Mekheimer (2012) writes;

The learning management system of Blackboard (Release 9) was utilized to give students access to readings in translation theory as well as passages in Arabic and English as assignments, using the Announcements, Assignments, and Course Instructor email features to introduce students to the syllabus of the course and the assignments required from them. The LMS of Blackboard was used since it consisted of the tools used for class management and for student administration and progress tracking .(p. 326)

Teaching online translation courses, Gavrilenko (2018) argues, requires “an interaction between teachers, translators and students in the context of information technologies, contributing to the creation of appropriate curriculum and an optimal environment for learning, self-study and improvement in the field of translation”(p.12). Likewise, Neubert (2000) points out that “the study of translation and, in particular, the academic institutions where the practice of translation is taught do not exist in an intellectual ivory tower. They serve social needs”(p.55). However, with the advent of e-learning in teaching translation courses, various aspects of the social needs of the
learners have diminished, particularly those relating to the scholastic social practices between
students and their instructors. The lack of the scholastic social practices has largely affected the
students’ academic achievement and performance and has resulted into various problematic issues
related to the teaching philosophy. Therefore, the idea of teaching online courses in translation
necessitates instructors to adapt a certain philosophy of teaching in order to address the drawbacks
resulting from the use of e-learning in translation courses.

The traditional styles of learning are limited and could not satisfy the renewed
epistemological and pedagogical and technological needs of e-learning environments. Therefore,
connectivism (Siemens, 2005; Downes, 2012) is considered to be among the most important
solutions for addressing the issues relating to the online translation courses. Connectivism works
effectively in learning communities. These learning communities are known as “the clustering of
similar areas of interest that allows for interaction, sharing, dialoguing and thinking together”
(Siemens, 2005, p.16). The members of these communities share information, knowledge, ideas
and thoughts in the form of conversations. These conversations are based on words, images,
videos, audios and multimedia. “In the connectivist model, the learning community is described
as a node, which is always part of a larger network…Nodes may also be organizations, libraries,
websites, journals, databases or any other sources of information”(Goldie, 2016, p. 1). Networks
are made up of two or more nodes which are connected in order to share resources. Online
course is a part of network. As such, the networks should have the following features (Downes, 2012):
diversity, autonomy of participants, openness, and connectivity.

The networks should be diverse that can accommodate different levels of learners and
provide various domains of knowledge and experience. Learners should have potential access to
rich and variable sources of knowledge as easy as possible. That is to say, knowledge derived
through connectivism is distributive in the sense that it consists of networks of connections shaped
from a set of continuous interactions between individuals, societies, organizations and
technologies that connect them. Knowledge inhabits with networks, and it can be stored in
different kinds of digital formats. Accordingly, connectivism is meant to link knowledge reception
to the “rich set of world views, previous experiences and frames in which it is embedded” (Goldie,
2016, p. 2). Using connectivism as a philosophy of teaching translation online courses may
represent an ideal solutions for many problems of e-learning such as lack of motivation, lack of
effective communication, psychological barriers between learners and instructors, lack of
socialization, problem of attrition and so on.

Starting from the premise that translation courses tend to be more interactive, and requires
effective communication between students and their instructors through feedback corrections,
instructor’s spontaneous remarks and comments on students’ output, the instructor should adapt
the teaching philosophy of connectivism that can fill in linguistic, communicative and
psychological gaps and the pedagogical shortcomings accompanied with the process of virtual
online courses. Doherty (2016) asserts that the adaptation of an eclectic pedagogy aims not only
to equip students with the necessary skills of translation but also familiarize them with the skills
necessary to deal with the advances in technology integrated in the translation process. Through
intensive deployment of technology in the education of translators and interpreters, we will be able
to graduate translators and interpreters with professionalism in translation as well as with technology-literacy to meet the market demand and enhance productivity.

7. Conclusion
The idea of adopting an explicit and well-defined teaching philosophy pays no dividends in teaching online courses of translation simply because the highly accelerated movement of the online learning is faced with a very slow movement in the conventional education. As such, this imbalanced relationship between online learning and conventional education has dramatically affected the teaching philosophy and has made it liquid and flexible in order to be consistent with the metamorphosing nature of the technology of education. Therefore, the idea of online education philosophy requires a kind of adaptation rather adoption. In other words, instructors have to adapt the teaching philosophies adopted in the conventional education to the renewed characteristics of the online courses. The traditional styles of learning are limited and could not satisfy the sustainable epistemological and pedagogical and technological needs of e-learning environments. The philosophy of teaching used in online translation courses may break with the traditional philosophy of translation courses used in real-life classrooms. Such a type of direct encounter between learners and instructor provides instructor with a bird's-eye view about students’ diverse attitudes in classroom, since their facial expressions, body language and reactions, their responses to the questions, their peer and group discussions and oral feedback can represent some key clues and relatively measureable indicators of their comprehension and digestion of the material being delivered to them.

In virtual classrooms, however, the instructor dismisses the human contact with his students that sharply influences the teaching process and turns it into automatic process that is in short of reciprocal relationship between the students and their instructors. The lack of students’ physical presence in the virtual classrooms inevitably affects the teaching philosophy of the instructor. Students’ lack of presence in the classroom is closely associated with psychological, social, linguistic, cultural, behavioral problems. The online instructors should be fully aware of the existence of these problems in the online system of education. Accordingly, the teaching philosophy of online courses should be permanently adapted to address these problematic issues inextricably related to online teaching courses. The instructors of online courses have preconceptions about the teaching problems arising from online courses and adapt his teaching material to be congruent with these issues. Critical thinking skills, technology literacy, theory of communication, the progressive nature of online teaching technology, and the idea of connectivism are among the important elements of the online teaching philosophy, which are regarded to be necessary for self-directed learning.

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EFL Learners’ Perception about Integrating Blended Learning in ELT

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Abstract
The study highlights English a Foreign Language (EFL) learners’ perceptions about integrating Blended Learning (BL) to facilitate them completing their foundation year English courses at a Saudi university. The focus of the study was to investigate “the EFL learners’ perception about integrating blended learning in their English Language Teaching (ELT) process”. For this purpose, a survey was constructed in three subsections investigating the learners’ viewpoints about BL as a platform: a) to improve learners’ interaction, b) to increase their interests, and c) to provide autonomous learning. A mixed approach was adopted for the study to be conducted in one of the largest universities in Saudi Arabia. The participants (n=120) taken as sample were studying intensive English courses at four different levels as per the Common European Framework of Reference (CEFR) during their first year at university. The data was collected by using the designed survey consisting sixteen closed and an open-ended question to investigate the learners’ perceptions in depth. The results indicate an overall positive attitude of the learners towards BL integration. ANOVA analysis of the variables shows insignificant effect of the ‘level of computer proficiency’ and the ‘level of learners’ language skills’ on their perceptions. The results conclude that the learners’ perceptions are found in favour of BL. Thus, it is recommended to integrate BL to increase the learners’ interest, interaction, and autonomy.

Keywords: blended learning, BL integration, ELT, learners’ autonomy

Cite as: Bukhari, S. S. F., & Basaffar, F. M. (2019). EFL Learners’ Perception about Integrating Blended Learning in ELT. Arab World English Journal (AWEJ) Special Issue on CALL (5), 190-205. DOI: https://dx.doi.org/10.24093/awej/call5.14
Introduction

An area where technology has had a stronger impact is the area of teaching and learning. Researchers have been trying to find innovative teaching methods that can motivate students, improve their interest in learning, raise their interaction, and boost their learning outcomes. Many recent studies have focused approaches in different ways that lay emphasis on learning through a combination of teaching-learning environments (Francis & Shannon, 2013; Banyen et al., 2016; Hess et al., 2016; Linawati, 2016; Liu, 2016) and the most effective of them is blended learning (BL). Recent investigation has made it obvious that BL is gaining a marked impression in the higher education. It has an impact as the “harbinger of substantial change” at K-12 level (Dziuban et al., 2018). As Vera (2014) explains:

A purposive dedicated process of acquiring expertise, knowledge and skills through the integration of in-class and extracurricular learning activities of educational process subjects with the auxiliary of mutually complementary traditional, e-learning, distance courses and mobile learning technologies under condition when learning activities’ time, place, path and pace are self-controlled by the student (Vera, 2014 p. 209).

Vera (2014) defines the learners’ interactive communication through information technology as basic apparatuses that increase the learners’ autonomy. BL model is based on combining face-to-face and online teaching. BL was found to offer the learners a better learning environment than that a face-to-face model or an online model (Jeffery et al., 2014).

Learning becomes an appealing experience when both young and adult learners have a user-friendly environment, a certain level of independence, a collaborative learning experience, interesting material, and challenging tasks (Bukhari, 2015). Learners’ learning capacities, differences, and individual Zone of Proximal Development (Vygotsky, 1978, p. 86) are the most important grounds to know and to reach an individual successfully. According to Bukhari (2016; 2019), the hidden talent can be ignited, and untapped learning potentials can be explored provided that the productive interaction and constructive environment are available for all.

By using an experimental design, Yurdal and Ülkü Eser (2013) investigate the effect of the use of virtual classroom and blended learning on students’ achievement and their attitudes compared to the face-to-face method. Results show that the BL method had a statistically significant contribution to the students’ achievements and their attitudes towards the course when compared to the face-to-face method. BL was also found to be an effective way to avoid monotony in teaching by providing collaborative learning to enhance student’s performance (Saltan, 2017) in an interesting, stimulating, and productive way if well planned pedagogically and socially.

Literature Review

An investigation through a pilot study (Banados, 2006) concludes that the implementation of the BL model proved to be successful after the team strived for four years. The results of the study show a remarkable improvement of the learners’ linguistic competence by using an online interactive interface. The researcher investigates the learners’ satisfaction via a survey at the end of the pilot study and it showed a high level of satisfaction ratio. The study highlights that only 32% students wanted to have more time to finish.
Several studies have investigated the effect of integrating BL in teaching. Waha and Davis (2014) explore students’ ideas on combining online and face-to-face activities in a master’s program in library and information science through a quantitative and qualitative study. Twenty-three students’ responses to 40 open-ended and closed questions were used to collect data. The information was gathered to know about the effectiveness and frequency of the model. Students responded in favor of the blended learning model, showed interest in the flexibility and convenience of the model.

Kuo et al. (2014) also find a high level of satisfaction among young students when integrating BL especially among students with an extroverted personality. Participants were master students enrolled in a BL course at university level. 22 students volunteered to respond to a survey designed for the study. Findings indicate that the students were satisfied with their BL course. Moreover, students with extroverted personality showed a higher level of satisfaction. They perceived interaction as an important part of their learning experience. Thus, BL was found more engaging than the general method of delivering a course.

In 2017, Wichadee implements a BL model using Edmodo as a tool in language learning. The study aimed at examining the effectiveness of the model in relation to oral proficiency, motivation, and attitude. A quasi-experimental design was employed to collect the data using tests and questionnaires distributed among 84 Intermediate students taking English course. Findings indicated that BL was effective. Students in the experimental group outperformed those in the control group in oral proficiency and were highly motivated. The researcher concluded that the blended learning model implemented in this study proved to be useful for learners for its ability to promote content connectivity and student interaction.

In contrast, different results related to attendance, attitude, and confidence have been revealed through a case study conducted by Saltan’s (2017). He investigates the learning experience of students studying pedagogic formation in a blended design. Although Saltan (2017) found BL as highly promising regarding professional development, learners indicated that face-to-face learning was more applicable, authentic, and effective than the online part.

Based on a crucial idea to “bridge the gap” (Bukhari, 2019 p. 127) between learners and teachers, Neumeier (2005) investigates a flexible BL design by combining modes and using parameters’ framework. To make BL as a better experience for all, the study focused on designing and implementing ‘Jobline LMU’. Neumeier’s study concludes that the BL design and the modes with face-to-face phases in combination with computer assisted language learning (CALL) are very important to make BL a useful experience for all.

Sagarra & Zapata (2008) highlight some suggestions to have the benefits of using online workbooks, materials, feedback method etc. to make online learning a ‘user-friendly’ experience for most learners. They tested 245 Spanish class learners in class and via electronic workbook and distributed a questionnaire to have the participants’ perceptions concerning the e-book, the experience of blended modes. The study concludes that the students found CALL as helpful in improving linguistic areas. The study also concludes that 74.2% found the online homework as interesting and 43.4% enjoyed doing it.
Another study used an observation and a survey to conclude that the use of technology in a BL environment intensifies the language learning by “forming deep and reliable skills” (Lyulyaeva & Shapiro, 2018). Learner centered strategies combined with information technology make a blend that proves to be a highly effective tool in the field of English Language Teaching (ELT) specially when it comes to teaching EFL learners (Arkhipova et. al. 2017). According to Bonk & Graham (2012), learners perceive BL as an opportunity and conceive it a convenient source where they can be more expressive and independent with the flexibility of time and hours.

**Research Problem**

In the Arabian Peninsula, ELT has faced many challenges (Bukhari, 2016) specifically because English is a foreign language in the region (Moskovsky & Picard, 2018; Mahboob, & Elyas, 2014; Kachru, 2006). Although, students follow intensive courses taught by highly qualified staff consisting of very structured classes for 18 hours a week, the results are not always satisfactory. Students starting the program with a low level of language skills, show below expected progress during lessons (classes) conducted in face-to-face mode for about four months spent at one level. Depending on the schedule, all learners spend extensive face-to-face sessions per week. Due to the course intensity and long hours of daily scheduled lessons, many students lose interest which results in dropdown of the attendance (Alkaff, 2013). Implementing an interactive course material, running assignments, conducting skill-based learning activities, and launching students centered activities face a lot of challenges either due to fluctuating attendance or lack of energy exhibited by the learners during face-to-face language sessions. Such situations compel EL teachers to make timely adjustments, be vigilant to opt alternatives, and have innovative ideas to ignite the learners’ interest to have a successful completion of the English language course (Bukhari, 2019 p. 127).

Considering the drop of learners’ interests, loss of teachers’ efforts, and increased challenges on both sides, the researcher hypothesized to work out the students’ perception on integrating blended learning in ELT. The study aimed at collecting the learners’ perspectives which is crucial to scrutinize further, whether the idea motivated the students, excited positivity towards BL as an opportunity to increase their interaction, and sense of being independent learners, which is highly desirable in such a situation.

**Research Questions and Hypotheses**

Considering the effectiveness of the blended learning environment, the aim of the present study is to investigate learners’ perception about implementing such a model in their context. The research is an attempt to answer the following questions:

1. What are the EFL learners’ perception about integrating blended learning in ELT process?
   a. Do the learners find the integration of BL more interesting?
   b. Do the learners believe that the integration of BL will increase their interaction?
   c. Do the learners think that the BL environment will boost their autonomy?

The hypotheses to be tested are:

1. Learners show a positive attitude towards integrating BL in English Language Teaching
2. Learners believe that implementation of BL can increase their interaction
3. Learners believe that BL can help them become more independent
Methodology
This study is a mixed method research mainly focusing on EFL learners’ perceptions about Blended Learning in ELT. The aim of the study was to investigate the learners’ point of view about the effect of blended learning on learners’ motivation, interaction, and learning autonomy. The study was conducted in one of the largest universities in the Kingdom of Saudi Arabia. Foundation year female students studying an intensive English course at the English Language Institute (ELI), Women Colleges Campus at King Abdulaziz University, were the participants of the study.

Participants: Sample of the Study
The students enrolled for the foundation year course with structured classes for 18 hours a week was the convenient sample of this study. Chosen convenient sample size consisted 120 female learners studying at four different Levels of English (A1, A2, B1, and B2) according to Common European Framework of Reference (CEFR) criteria. The data collection phase initially started by taking students’ consent to respond to the survey. 120 female students willingly answered the questionnaire. Table 1 shows the distribution and the size of sample of the study comprised of participants from four levels whose identity was kept anonymous. A consent was taken before the data was gathered on a questionnaire designed and distributed among the participants.

<table>
<thead>
<tr>
<th>Level</th>
<th>Sample Size</th>
<th>Overall GPA</th>
<th>Learners’ Computer Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>N=19 (13.4%)</td>
<td>3.32</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Std. D</td>
<td>.82</td>
<td>.96</td>
</tr>
<tr>
<td>102</td>
<td>N=6 (4.2%)</td>
<td>3.67</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>4</td>
<td>2a</td>
</tr>
<tr>
<td></td>
<td>Std. D</td>
<td>.52</td>
<td>1.55</td>
</tr>
<tr>
<td>103</td>
<td>N=51 (35.9%)</td>
<td>3.37</td>
<td>4.25</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Std. D</td>
<td>.80</td>
<td>.87</td>
</tr>
<tr>
<td>104</td>
<td>N=66 (46.5%)</td>
<td>3.65</td>
<td>4.35</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Std. D</td>
<td>.59</td>
<td>.85</td>
</tr>
</tbody>
</table>

*Note.* N=Number, % =Percentage, Std. D= Standard Deviation, M=Mean

Research instrument
The data was collected using the survey designed by the researchers. The researchers prepared an electronic survey consisted of 20 variables, out of which 16 statements directly led to investigating the students’ perceptions about teaching English through blended learning environment. The survey was developed in three major sections probing the learners’ perceptions in relation to the
BL environment (Al Zumor, et al., 2013). Each of the sections contained a certain number of statements focusing on: a) Blended Learning is Advantageous and Interesting (statements 1-5); b. Blended Learning is Interactive (statements 6-10); and c. Blended Learning as Convenient and Independent Learning (statements 11-15). Statement no. 16 (“I find that the proper way of learning depends on…”) was used to investigate the learners’ overall perception.

Last open-ended question was about “suggestions and/or comments”. It was used to have the learners reveal their suggestions or in-depth opinions about the blended learning environment. The data collected through the open-ended question was to have the qualitative analysis. The researchers first prepared the survey in English then translated it into Arabic to facilitate the learners to understand without any confusion or difficulty. To answer the question about “Learners’ perception about integrating blended learning in their EFL learning process”, the data was analyzed for the 15 main statements divided into three sections covering the learners’ perceptions and ideas of integrating blended learning in the English course. The responses on the questionnaire were collected within a two months’ period.

Data Results and Interpretations
The data gathered through the questionnaire was checked for reliability using SPSS v. 17.0.

Table 2
Instrument Reliability Test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid</td>
<td>142</td>
<td>.86</td>
<td>19</td>
</tr>
<tr>
<td>Excluded</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: N= Number.
Table 2 shows an Alpha value (=.86) that confirms the internal consistency of the scale.

Table 3
Learners’ Perception: “Blended Learning is advantageous and interesting”

<table>
<thead>
<tr>
<th></th>
<th>1. BL - more interesting.</th>
<th>2. BL - more useful.</th>
<th>3. BL - more convenient and flexible.</th>
<th>4. BL - more effective.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>SA</td>
<td>37</td>
<td>26.1</td>
<td>31</td>
<td>21.8</td>
</tr>
<tr>
<td>A</td>
<td>58</td>
<td>40.8</td>
<td>66</td>
<td>46.5</td>
</tr>
<tr>
<td>N</td>
<td>34</td>
<td>23.9</td>
<td>28</td>
<td>19.7</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>5.6</td>
<td>14</td>
<td>9.9</td>
</tr>
<tr>
<td>SD</td>
<td>5</td>
<td>3.5</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>100</td>
<td>142</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: SA= Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree

The data in Table 3 represents the frequency and percentages of the respondents’ perception to the first section of the survey. The results show that 66.9% (SA37 + A58 = 95) learners overall agreed
to the statement no.1 that blended learning is more interesting. However, 9.1% learners disagreed (D8 + SD5=13) and 23.9% (N=34) stayed neutral to the statement. 97 (68.3%) learners agreed to the statement no.2 “Blended learning is more useful”, while 17 (12%) learners disagreed to it and 28 (19.7%) were neutral. Learners’ perception about the blended learning as convenient and flexible learning investigated through the statement no.3 is positive as 78.9% learners (A44 + SA68 =112) agreed to the statement. The table also highlights that 71.8% of the learners (102) responded as ‘agreed’ for the effectiveness of blended learning (the statement no.4), which is more than the percentage of the learners (9.2%) who overall disagreed. About 64.8% learners responded in favor of the statement no.5 that learners feel more confident when they use English online (BL), however 21.1% remained neutral and 14.1% disagreed to that.

Conclusively, it can be inferred that the Blended Learning English course is considered as advantageous and interesting by the learners and they find it more flexible, convenient, and a useful way to improve confidence by practicing online along with the face to face sessions.

Table 4
Learners’ Perception: “Blended Learning is Interactive”

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>SA</td>
<td>30</td>
<td>21.1</td>
<td>40</td>
<td>28.2</td>
<td>51</td>
</tr>
<tr>
<td>A</td>
<td>60</td>
<td>42.3</td>
<td>77</td>
<td>54.2</td>
<td>58</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>23.2</td>
<td>20</td>
<td>14.1</td>
<td>27</td>
</tr>
<tr>
<td>D</td>
<td>17</td>
<td>12</td>
<td>5</td>
<td>3.5</td>
<td>6</td>
</tr>
<tr>
<td>SD</td>
<td>2</td>
<td>1.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>100</td>
<td>142</td>
<td>100</td>
<td>142</td>
</tr>
</tbody>
</table>

Note: SA= Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree

To gauge the learners’ response on BL as an interactive learning, the questionnaire comprised variables to explore multidimensions. Statement no. 6 about the learners’ ideas on BL (as a supportive platform to improve communication between students) received 63.4% (SA 21.1% + A 42.3%) responses in agreement, 23.2% responses were neutral, and 13.4% (D 12%+ SD 1.4%) disagreed to it. Whereas, the statement no.7 about the learners’ perception on BL as a platform to benefit the students from other students’ communication received the second highest percentage proving that BL is an Interactive platform of learning. A total 117 learners (SA 40 + A 77) responded in agreement. 5 learners (3.5%) disagreed and 20 (14.1%) remained neutral. 83.8 recorded as the highest percentage (48+71=119) that indicates stronger agreement of learners towards the statement no.9, however, 3.5% disagreed and 12.7% responded neutral. It exhibits a strong inclination towards the perspective that BL benefits the learners with teachers’ feedback. Therefore, it can be interpreted that majority of the learners perceive blended learning as providing an effective interactive environment, where they can not only benefit themselves from the peer-feedback and peer-interaction but also get teachers’ feedback, teacher/students’ suggestions, others’ comments to improve, and enjoy multiple patterns of interaction.
### Table 5

**Learners’ Perception on “Blended Learning as Convenient and Independent Learning”**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$f$</td>
<td>%</td>
<td>$f$</td>
<td>%</td>
<td>$f$</td>
</tr>
<tr>
<td>SA</td>
<td>47</td>
<td>33.1</td>
<td>40</td>
<td>28.2</td>
<td>49</td>
</tr>
<tr>
<td>A</td>
<td>60</td>
<td>42.3</td>
<td>48</td>
<td>33.8</td>
<td>59</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td>14.1</td>
<td>36</td>
<td>25.4</td>
<td>25</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
<td>8.5</td>
<td>15</td>
<td>10.6</td>
<td>9</td>
</tr>
<tr>
<td>SD</td>
<td>3</td>
<td>2.1</td>
<td>3</td>
<td>2.1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>100</td>
<td>142</td>
<td>100</td>
<td>142</td>
</tr>
</tbody>
</table>

**Note:** SA= Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree

Table 5 represents the analysis of the learners’ perceptions on the variables investigating BL as convenient and independent learning (statements no. 11, 12, 13, 14, and 15). The response on statement no.11, BL as a platform for learners to work according to their own pace, received 75.4% learners’ agreement (SA 33.1% + A 42.3%), 14.1% as neutral, and 10.6% (D 8.5% + SD 2.1%) disagreed to it. The statement no.12 regarding the learners’ perceptions on blended learning environment being supportive for effective time management received 88 learners in agreement, 36 responded neutral, and 18 disagreed. About 76% learners (SA 34.5% + A 41.5%) agreed to ‘BL as an independent task work environment’ (statement no. 13), however, a minimal ratio (9%) ‘disagreed’ and 17.6% learners responded neutrally. Statement no.14, investigating the learners’ perceptions on ‘Through Blended Learning, I can learn the way I like to learn’ received 75.4% (SA 29.6% + A 45.8%) responses as ‘agreed’, 20.4% as ‘neutral’, and 4.2% (D 3.5% + SD 0.7%) disagreed. The learners’ interest in BL at university and finding it convenient (statement no. 15). was recorded as 55.6% (SA 21.8% + A 33.8%) in agreement, but 28.9% responded neutral and 13.5% disagreed. To infer, it can be stated that most learners perceive BL as convenient and independent learning where they can work autonomously on their own pace.

### Table 6

**Learners’ Perception about Integration of Online and Face-to-Face Sessions in BL**

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. D</th>
<th>$F$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40% face to face and 60% online</td>
<td>3.58</td>
<td>.09</td>
<td>1.06</td>
<td></td>
<td>7</td>
<td>4.9</td>
</tr>
<tr>
<td>50% face to face and 50% online</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>10.6</td>
</tr>
<tr>
<td>60% face to face and 40% online</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
<td>23.9</td>
</tr>
<tr>
<td>100% face to face</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>42.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>142</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** $f$=frequency, %=Percentage, Std. D=Std. Deviation
To explore more about the amalgamation of the face-to-face sessions integrated with the online sessions in a BL setting, the questionnaire included statement no.16 to investigate the learners’ perception on the ratio of the amalgamation of face-to-face combined with the online sessions. Table 6 shows that 60 learners favored the design of the BL having integration of ‘60% face-to-face and 40% online’ sessions. 34 (23.9%) learners chose the ‘50% face-to-face and 50% online session’ and 15 (10.6%) learners chose the ‘40% face-to-face and 60% online’ integration. Largely, it can be deduced that the majority of the learners chose for the combination of the ‘60% face to face and 40% online’ sessions.

Considering the scattered size of the participating learners as the sample of study and the learners’ enrolled at four different levels at the ELI English courses, the variable ‘Level of English’ was tested through ANOVA for its effect on the dependent variables. The number of learners at Level-104 was the highest [66 (46.5%)] among the participants who responded to the questionnaire, in comparison with the learners from Level-101 [19 (13.4%)] Level 102 [6 (4.2%)], and Level-103 [51 (35.9%)] who took part in the study.

It is clear from the Table 7 that there was no significant effect level on the learners’ perception of blended learning environment and its integration in EFL classes. Thus, it can be interpreted that learners’ perceptions are strongly in favour of the integration of BL in the English course at university.

Table 7
ANOVA - Effect of Level of English on Learners’ Perception of BL

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>f</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BL- more interesting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.64</td>
<td>3</td>
<td>.88</td>
<td>.87</td>
<td>.46</td>
</tr>
<tr>
<td>Within Groups</td>
<td>139.84</td>
<td>138</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>142.48</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. BL-more useful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.25</td>
<td>3</td>
<td>.75</td>
<td>.78</td>
<td>.50</td>
</tr>
<tr>
<td>Within Groups</td>
<td>131.61</td>
<td>138</td>
<td>.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>133.86</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. BL-more convenient &amp; flexible.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.44</td>
<td>3</td>
<td>.48</td>
<td>.53</td>
<td>.66</td>
</tr>
<tr>
<td>Within Groups</td>
<td>124.53</td>
<td>138</td>
<td>.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>125.97</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. BL more effective.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.12</td>
<td>3</td>
<td>.37</td>
<td>.41</td>
<td>.75</td>
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<tr>
<td>Within Groups</td>
<td>127.30</td>
<td>138</td>
<td>.92</td>
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<td></td>
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<tr>
<td>Total</td>
<td>128.43</td>
<td>141</td>
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<td></td>
</tr>
<tr>
<td>5. Confident when using English online.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.18</td>
<td>3</td>
<td>1.06</td>
<td>.92</td>
<td>.43</td>
</tr>
<tr>
<td>Within Groups</td>
<td>158.06</td>
<td>138</td>
<td>1.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>161.24</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. BL improves S-S communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.57</td>
<td>3</td>
<td>.52</td>
<td>.54</td>
<td>.66</td>
</tr>
<tr>
<td>Within Groups</td>
<td>134.41</td>
<td>138</td>
<td>.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>135.98</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Benefit S-S communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
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<td>3</td>
<td>.26</td>
<td>.45</td>
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<tr>
<td>Within Groups</td>
<td>78.53</td>
<td>138</td>
<td>.57</td>
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<tr>
<td>8. Improves communication between S-T.</td>
<td>Total</td>
<td>79.30</td>
<td>141</td>
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</tr>
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<td>--------------------------------------</td>
<td>-------</td>
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<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
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<td>3</td>
<td>1.15</td>
<td>1.62</td>
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<tr>
<td>Within Groups</td>
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<td>138</td>
<td>.71</td>
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<td>Total</td>
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<td>141</td>
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<td></td>
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<tr>
<td>9. Benefits of Teachers' feedback.</td>
<td>Total</td>
<td>83.18</td>
<td>141</td>
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<tr>
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<td>3</td>
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<td>.59</td>
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<td>10. Benefits of peers' comments/ suggestions</td>
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<td>141</td>
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</tr>
<tr>
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<td>138</td>
<td>.58</td>
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<tr>
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<td>Total</td>
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<td>1.77</td>
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<td>138</td>
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</tr>
<tr>
<td>12. BL- Effective time management</td>
<td>Total</td>
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<td>141</td>
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<td></td>
</tr>
<tr>
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<td>3</td>
<td>1.13</td>
<td>1.03</td>
<td>.38</td>
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<tr>
<td>Within Groups</td>
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<td>138</td>
<td>1.09</td>
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<td></td>
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<tr>
<td>13. BL independent task-work environment</td>
<td>Total</td>
<td>154.37</td>
<td>141</td>
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<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.56</td>
<td>3</td>
<td>.52</td>
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<tr>
<td>Within Groups</td>
<td>102.81</td>
<td>138</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. BL - my own way of learning</td>
<td>Total</td>
<td>109.75</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.40</td>
<td>3</td>
<td>.47</td>
<td>.65</td>
<td>.58</td>
</tr>
<tr>
<td>Within Groups</td>
<td>98.36</td>
<td>138</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Interest in joining - BL course at university</td>
<td>Total</td>
<td>100.00</td>
<td>141</td>
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<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.57</td>
<td>3</td>
<td>1.19</td>
<td>.95</td>
<td>.42</td>
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<tr>
<td>Within Groups</td>
<td>173.48</td>
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<td>1.26</td>
<td></td>
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</tr>
<tr>
<td>16. BL- Integrating F2F and online learning</td>
<td>Total</td>
<td>177.05</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.72</td>
<td>3</td>
<td>1.24</td>
<td>1.11</td>
<td>.35</td>
</tr>
<tr>
<td>Within Groups</td>
<td>154.77</td>
<td>138</td>
<td>1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>158.49</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: df = degrees of freedom, f = frequency, Sig. = Significance

Table 8
ANOVA - Effect of Computer Literacy Level on Learners’ Perception of BL

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>f</th>
<th>Sig.</th>
</tr>
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<td>1. BL - more interesting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>8.23</td>
<td>4</td>
<td>2.06</td>
<td>2.10</td>
<td>.08</td>
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<tr>
<td>Within Groups</td>
<td>134.25</td>
<td>137</td>
<td>.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>142.48</td>
<td>141</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. BL - more useful.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4.36</td>
<td>4</td>
<td>1.09</td>
<td>1.15</td>
<td>.33</td>
</tr>
<tr>
<td>Within Groups</td>
<td>129.50</td>
<td>137</td>
<td>.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>133.86</td>
<td>141</td>
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<tr>
<td>EFL Learners’ Perception about Integrating Blended Learning</td>
<td>Bukhari &amp; Basaffar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>-------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. BL - more convenient and flexible.</td>
<td>Between Groups</td>
<td>6.73</td>
<td>4</td>
<td>1.68</td>
<td>1.93</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>119.24</td>
<td>137</td>
<td>.87</td>
<td></td>
</tr>
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<td></td>
<td>Total</td>
<td>125.97</td>
<td>141</td>
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<td></td>
</tr>
<tr>
<td>4. BL - more effective.</td>
<td>Between Groups</td>
<td>3.93</td>
<td>4</td>
<td>.98</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>124.49</td>
<td>137</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>128.43</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Confident when using English online.</td>
<td>Between Groups</td>
<td>4.38</td>
<td>4</td>
<td>1.10</td>
<td>.96</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>156.86</td>
<td>137</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>161.24</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. BL - improves S-S communication</td>
<td>Between Groups</td>
<td>8.87</td>
<td>4</td>
<td>2.22</td>
<td>2.39</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>127.11</td>
<td>137</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>135.98</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Benefit S-S communication</td>
<td>Between Groups</td>
<td>1.63</td>
<td>4</td>
<td>.41</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>77.66</td>
<td>137</td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>79.30</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Improves communication between S-T.</td>
<td>Between Groups</td>
<td>1.10</td>
<td>4</td>
<td>.28</td>
<td>.38</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>99.88</td>
<td>137</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.99</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Benefits of Teachers' feedback.</td>
<td>Between Groups</td>
<td>.12</td>
<td>4</td>
<td>.03</td>
<td>.05</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>83.07</td>
<td>137</td>
<td>.61</td>
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<tr>
<td></td>
<td>Total</td>
<td>83.18</td>
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<tr>
<td>10. Benefits of peers' comments/suggestions</td>
<td>Between Groups</td>
<td>3.79</td>
<td>4</td>
<td>.95</td>
<td>1.66</td>
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<td></td>
<td>Within Groups</td>
<td>78.36</td>
<td>137</td>
<td>.57</td>
<td></td>
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<tr>
<td></td>
<td>Total</td>
<td>82.15</td>
<td>141</td>
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</tr>
<tr>
<td>11. BL-Own pace of work</td>
<td>Between Groups</td>
<td>.61</td>
<td>4</td>
<td>.15</td>
<td>.15</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>141.14</td>
<td>137</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>141.75</td>
<td>141</td>
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<td></td>
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</table>
12. BL- Effective time management

<table>
<thead>
<tr>
<th></th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective time management</td>
<td>4.64</td>
<td>149.74</td>
<td>154.37</td>
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</table>

13. BL - independent task-work environment

<table>
<thead>
<tr>
<th></th>
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<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent task-work environment</td>
<td>1.60</td>
<td>108.14</td>
<td>109.75</td>
</tr>
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</table>

14. BL - my own way of learning

<table>
<thead>
<tr>
<th></th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>My own way of learning</td>
<td>3.69</td>
<td>96.31</td>
<td>100.00</td>
</tr>
</tbody>
</table>

15. Interest in joining - BL course at university

<table>
<thead>
<tr>
<th></th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest in joining BL</td>
<td>1.84</td>
<td>175.21</td>
<td>177.05</td>
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</table>

16. BL- Integrating F2F and online learning

<table>
<thead>
<tr>
<th></th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrating F2F and online learning</td>
<td>1.84</td>
<td>156.64</td>
<td>158.49</td>
</tr>
</tbody>
</table>

Note: df=degrees of freedom, f=frequency, Sig.= Significance

Table 8 shows the variables (16 statements) tested against the learners’ computer literacy skills have not proved to be significant (no values are less than the p=0.05 value). The table also shows insignificant statistical correlation found between the learners’ perceptions about BL and their level of computer literacy skills. As shown through the Table 1, there were differences among the learners’ level of computer literacy skills. However, the learners’ response in agreement to the statements used to measure their perceptions about BL integration was in favour. Therefore, it can be deduced that the learners’ level of computer literacy skills didn’t affect much their perceptions about integration of the BL in English course. When tested through ANOVA, all the values calculated are nonsignificant (none of them found below the p-value =.05).

The open-ended question was about learners’ suggestions or comments. The students mentioned that online learning should be integrated when needed, especially when face-to-face classes are not possible. Most learners expressed their strong inclination towards joining BL classes not only in their English language courses but in different subjects as well. They expressed their interest in joining BL classes as an alternative instead of staying long hours in the classroom. However, they specified the fact that it is possible through the existence of planning and strong internet server.

Findings and Discussion

Findings obtained from study strongly supports the literature, see for example (Hess et al., 2016; Linawati, 2016; Banyen et al., 2016; Lyulyaeva & Shapiro, 2018). Participants of the study showed
a positive attitude towards integrating blended learning in English language teaching. The data revealed an above average percentage of interest found among learners for the online courses to be taught along with the face-to-face sessions, i.e., 67% as compared to 9% learners who did not find blended learning more interesting than face-to-face. Moreover, 68% of the participants believed that blended learning is more useful, leaving 12% learners who disagreed with the statement, and 20% were not sure about it. However, the element of enjoyment and friendly-user effect was recognized by the respondents who favored the BL environment. Majority of learners, 79%, agreed to the fact that BL is a more convenient and flexible way of learning with a percentage of 72% who responded that it is an effective way of learning. Findings, therefore, confirms the first hypothesis that students have a positive attitude towards BL as the other studies reported the positive perceptions of the learners (Sagarra & Zapata, 2008).

Considering the second hypothesis, the results established that the learners believe in the implementation of BL to increase their interaction. As per results, an above average, 63% of the participants, believe that blended learning enhances teacher-students’ interaction. They also believe that online platforms are a good way for students’ communication and can serve for the purpose of the informal or formal feedback sessions. Overall, participant learners in this study strongly believe that BL can create an interactive learning environment in EFL courses which can raise the chances of self-learning experiences for the students as reported by Garrison & Kanuka (2004). As per third hypothesis, learners believe that the blended learning can help them become more independent, it is interesting to see through the responses that 75% of the participants perceive it a convenient source providing more independent learning environment with flexible timing (Bonk & Graham, 2012).

Conclusion
To sum up, participants in this study positively perceived blended learning as an interesting, interactive and independent learning environment for EFL courses regardless of their English language level or computer literacy. The highest percentage of learners were in favor of incorporating 40% of online learning leaving 60% for face-to-face learning. The open-ended survey question revealed opinions in depth. Learners’ expression of their strong interest in BL classes was found in favour of English courses. They find it as an alternative for long hours in class sessions. It is also evident that the learners are aware of the fact that BL prerequisites a good planning and a strong internet connectivity. However, some are of the opinion that online learning should only be integrated when needed, i.e. if face to face learning is not possible. Finally, the study exposes the learners’ inclination towards the BL integration as recorded through the method applied during investigation. Certain factors analyzed through learners’ responses determine that there is a need for “substantial change” and BL integration since the mode of study at K12 level has transformed with the incorporation of technology (Dziuban et. al., 2018). BL is becoming a center of interests and achieving a significant impact at certain levels in Higher Education (Waha & Davis, 2014).

Clearly, the derived results of the study are encouraging, and the voice of the learners support the idea of BL seen as an effective mode to enhance the learners’ interaction, autonomy, and interest, and beneficial to cause reduction in the long hours study mode. As for the course studied for about a whole year spending long hour in class-sessions, there is need to have BL. The
learners’ interest more into face-to-face learning hours is clear through the results (Table 7) that signify clear ration of (42.3%) n=60 learners in favor of having integration of ‘60% face-to-face and 40% online’ sessions’ (Saltan, 2017). The learners perceive that BL platform has potential to improve the teaching and learning process in an educational environment and it can be a convenient way of ELT and learning (Neumeier, 2005). Eventually, we can assume that the contemporary study-hours have increased the pressure which is mostly challenging and exhausting for both the teachers and learners (Alkaff, 2013) therefore, BL environment can provide convenient and independent learning which can enhance interaction among learners.

**Recommendation**
The perception about integrating BL and creating an environment with a combination of the online and face-to-face learning was investigated in the study. An overall positive attitude was found indicating Saudi female learners’ belief that BL can boost their interest, increase interaction, and help the learners to become more independent. Based on these results, it is strongly recommended that at least 40% of the curriculum should be designed to be presented online. Learners should avail online learning platforms, since the computer age has raised up its usage at all spheres of life. The research recommends that the institutes should arrange for platforms like LMS, Blackboard etc. ready with online materials to incite interest of the learners and BL to be used to reduce the long face-to-face hours for learners as not to lose interest in the L2 course throughout the foundation year. Moreover, the online part should be pedagogically appropriate and well planned. Including interactive platforms where learners can post and discuss their ideas with their teachers as well as with their peers should be part of the online course.

Since feedback functions as an essential part of the learning process, the teachers should regularly provide it using both modes the online and the face-to-face sessions. The sample size of the study is a nook to hook the problem at smaller scale, conducted on 120 female students as study sample. It leaves a ground to focus a larger sample size including male learners. Teachers’ perception can also be a part of an investigation as teachers play a noteworthy role in ELT. Conducting individual interviews and focus groups can give a more in-depth understanding on how learners perceive integrating BL in their curriculum. Other streams of investigation can explore the types and usefulness of the BL materials, measuring learners’ level of interests and interaction during BL courses, BL in contrast with the only face-to-face sessions etc.

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Memory Stay Or Stray?: Irregular Verbs Learning Using Kahoot!

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Abstract
Even though gamification has been lingering for years now, its popularity has been rising ever since. In fact, across disciplines and contexts, the amplification of 21st century learning has been giving gamification a special place in education. There are numerous studies conducted on the use of gamification among school children, university students or even trainee teachers. Coincidentally, all of these studies have shown that gamification does impact their learning. Hence, as harmless as it seems, any teachers who are not equipped with such knowledge on the benefits of gamification may hinder their learners and themselves from reaching their utmost teaching and learning experience especially when it comes to grammar learning among the younger pupils. Considering this thought in mind, this research was conducted to prove that the use of Kahoot! helps the Year 3 pupils in retaining the English Irregular verbs. This quasi – experimental designed research gathered data from a sample of 35 Year 3 pupils using the pre-test and post-test results. The findings which were analysed descriptively using sample t-test showed that pupils’ performances in the post-test improved over the use of Kahoot! in classroom. In conclusion, this research provides an insight on number of ways that gamification can actually impacted the pupils’ learning; especially in terms of memory retention. It also works as a stepping stone for more researches to study on the effectiveness of using Kahoot! in tackling any part of learning especially among the younger learners.

Keywords: Game-based student response system, gamification, irregular verbs, kahoot!, memory retention

Introduction
For the past decades, the world was not that reliable on the technology. However, as 4th Industrial Revolution is kicking in, the use of technology has been blooming and spreading like wildfire to all aspects of lives in the current days. As a matter of fact, statistics showed that there were over 40% of online transactions are done as compared to the past years. This is the simplest evidence to show the influence of ever growing technology towards mankind’s daily lives including shopping! On top of that, Perry (2015) reiterates that three billion hours were spent on gaming all across the world and with the presence of mobile technologies, gaming is now mobile. Besides influencing mankind’s current lifestyle, the domination of Information and Communication Technologies (ICT) seemed to play an integral part in the current education world especially with the emphases on 21st Century Learning.

In fact, according to Yunus (2018), teachers these days are ‘forced’ to shift their pedagogy practises as it is very much influenced by the ever-updated technology. Consequently, the notion of gamification which was introduced by Nick Pelling in 2002 has resulted to the birth of interactive applications namely known as Kahoot!, Socrative, Quizizz, Quizlet and Plickers. This concept is idealised with the application of parts of game mechanics into other web properties to enhance engagement. Over the recent years, researchers proved that gamification have shown worthy in assisting learners’ motivation and engagement in learning. Even though, there are a number of researches on the use of Kahoot! to enhance English grammar learning, unfortunately, there aren’t as much when it comes to local research on how Kahoot! impacted the Irregular verbs learning particularly among the nine year old school pupils. As one might know, Irregular verbs learning is viewed as one of the toughest grammar elements to be mastered especially among those who learn English as their second, third or foreign language. As a matter of fact, the researcher also found out that this issue affected his pupils at school too.

An average Malaysian students would have roughly about 11 – 12 years of English language education before starting the tertiary level which means that they should at least possess a satisfactory level of English by then. However, a research carried out by Singh et al. (2017) have proven otherwise. Almost thirty percent of the grammatical errors made by the Diploma students in Malaysia is contributed from verb tense including the Irregular verbs. From this finding, it is more apparent as to how significant it is to curb this issue as early as possible. Traditionalist believed that memorisation is the only way to retain information on Irregular verbs. To certain extent, this belief is somewhat true considering that “one rule doesn’t apply to all” concept of Irregular verb. However, this technique only turns the whole learning experience dreadful and mundane, which in the end contradicts to Malaysian’s Ministry of Education vision of “fun learning in classroom”. Since the growing population of educational applications has been taking a lot of attention lately, it only makes more sense if current teaching and learning employs any of these applications in making even mundane and complicated part of grammar more fun and relatable to the learners especially the young ones.

Among the reason to resistance towards English practise is using the right grammar. To top that of, irregular verbs in particular seems to be very confusing with the inconsistent and ever changing rules. This led to low mastery on Irregular verbs among them. Meanwhile, to some others, they chose to simply use the same concept on everything; in other word, they
overgeneralised. According to Richards (1974), overgeneralisation happens when one deviant structure is used against two regular structures. Dörnyei (2009) inferred to this by stating that, fewer attentional resources are necessitated when rules have been highly automatized. This resulted to larger portion of rules functioned on auto pilot. Sadly, with limited knowledge of past tense form, inflections such as ‘ed’ is added after action words (verbs); “She cutted the fruits last night” (Wee, Sim & Jusoff, 2010). Another cause to this would be the influence of the first language or mother tongue such. Let’s take the Malay language for an example. Ideally, Malaysian Malays do not have any irregular forms or additional suffixes to indicate the action that has taken place in fact, they use the word telah or expression of time such as semalam (Suppiramaniam, 2012).

Another issue pertaining this topic is the low memory retention among pupils in learning Irregular verbs. Up until now, there are no specific style in teaching irregular verbs. Even so, we could somehow agree that the option is to go with rote learning, in which pupils are given a list of irregular verbs and asked to memorise them. It could work on some of them with some of the words. However, in most cases pupils tend to get it mixed up especially when the words are grouped together with the past participle form. Therefore, before deciding on the correct method to teach irregular verbs, teachers must know that there are two types of memory; declarative memory and procedural memory. According to O’Grady (2006), declarative memory deals with the “leaning and storage of facts and events including arbitrary information” (p.2). This type of memory is often associated to lexicon or mental dictionary, in which the memory works when the learner is able to relate to the new knowledge obtained including its meaning, pronunciation and use. Nevertheless, the information stored in this memory required ones’ conscious awareness upon retrieving it. As for the procedural memory, it centres on the use of broad range of motor and cognitive skills particularly the ones involving sequencing (Pinker & Ullman, 2002). It is believed that this type of memory assists the computations and symbol manipulation in regards to grammar components such as syntax, non-lexical semantics, morphology, and phonology. Unlike its counterpart, this memory operates through unconsciousness, in other words, the learners may not be aware of what enable them to form or interpret sentences especially in first language acquisition. Often, whenever learning second language is discussed, the memory involved would be declarative. So the question at hand would be, how to ensure that the lesson employed hits this part of their memory in learning about irregular verbs? Therefore, the aim of this paper is to scrutinize the use of Kahoot! in developing English Irregular verbs among the young English language learners.

**Literature Review**

In this world of technology, everything is possible. In the olden days, teaching and learning only requires a simple tool as a blackboard and a chalk. However, these days, even social media platforms can be transferred into a learning experience. A research conducted by Jalaludin, Abas and Yunus (2019), resulted that the function of “askme” in Instagram can provide a conducive learning to the pupils besides improving their English writing skill and parent-child interaction at home. If one might wonder, what are the reason behind all these possibilities, the answer would be “the computer technologies”. According to Yunus, Salehi and Amini (2016), there are many ways computer technologies can be corporate into language learning. Among of this contribution would be the existence of the computer facilities such as graphics, videos, text, audio, animations
and above all, interactivity. The idea of computer technologies has been given pathways to other ideologies to surface such as gamification and game-based student response system.

**Gamification and Game-based Student Response System (GSRS)**

Khaleel et. al (2016) define gamification as an integration of game elements in a non-game to solve task at hand effectively. Why is gamification a huge deal among the educators around the globe? As agreed by many, gamification has effectively improved learners’ learning experience in comparison to the traditional teaching and learning. Yolageldili & Arikan (2011) concluded in their study that *gamification* encourages grammar learning to be more enjoyable and permanent because the game successfully provides a meaningful context for communicative grammar practice. In fact, 63.33% of the participants of the aforementioned study disagreed when learners’ knowledge of grammar is claimed not to be measurable when games are used in classroom. This testimony indicates that *gamification* has great potential to be used in aiding grammar learning. In fact, through games, teachers could create contexts which allows for unconscious learning to take place because learners’ attention is on the message, not on the language (Cross, 2000). As a result, once learners are paying attention to the game as an activity, they are acquiring the language in the same way they acquired their mother tongue which is by not being aware of it. This element of unconscious learning would be very fitting with this study especially in applying the irregular verbs learning which is said to be prompted even before than the regular verbs. Hussein (2015) highlights four key domains on how gamification benefitted the learners. Among the two domains involved learners especially the young ones see this approach rather more entertaining and fun hence lowering their affective filter and keep the engagement level at bay. Secondly, gamification allows learners to reflect upon their own learning.

As similar it is to the traditional quizzes, gamification reaches another level on its own as it encourages the learners to compete with each other to be placed among the upper ranks. Hence making the experience more fun and meaningful to the learners particularly those nine year olds. Coincidentally, apart from making the learning more fun to the learners, this approach comes very handy to the teachers as it allows them to assess their pupils’ learning formatively. The data can be retrieved right away and enables future intervention to be made. Finally, gamification-based such as *Kahoot!* allows learners to keep on trying to get themselves onboard with the lessons without feeling intimidated or fear of making themselves seemed foolish. An example of this practise is exemplified from the display of only the three top places in the final leaderboard. This way, those who didn’t score well won’t be at any risk of exposing their performance to the others. Hence, enable them to work at their own pace without feeling any pressure or embarrassment from it, which eventually contributed to *meaningful learning*; a form of learning resulted from a well organised and relevant structures as well as its association to emotional commitment tangled between the new and existing knowledge. Normally, this form of learning takes place once all of the following prerequisites must be met by the learners; (1) the material learned must be potentially meaningful (2) the learner must have relevant concepts and propositions in their mind (3) the learner opted to relate and integrate the new ideas with the existing ones.

In earlier discussion, when the writer mentioned ‘game elements’, this refers to game mechanics, game design and game techniques. ‘Leaderboard’ as the one instilled in *Kahoot!* is one of the core game elements which shows rankings of game players based on their accomplishment.
levels. During a semi-structured interview carried out with the respondents, the writer found out that the pupils found the marks display as a drive to compete with not only others but their own selves. This situation clearly evident the presence of intrinsic motivation among the pupils. Just when there’s leaderboard, there will be points or scores and Kahoot! is all about that. According to a study carried out by Flores (2015), for each of the Kahoot! quizzes, learners are awarded with points based on their performance. The basic calculations offer 1,000 points for any correct responses answered under 0.05 seconds. From this feature, a trace of extrinsic motivation is made more visible particularly when the pupils tried to answer the questions all by themselves. Besides the leaderboard and scoring system, other features which help maintain its acceptance among its users are the integration of technical features such as music, graphics, and colours as well as feedback and problem solving or challenge with uncertain outcomes.

Above all, Kahoot! can be perceived as a resurrection of the clicker in the modern day. The evolution of the older Student Response System (SRS) to Game-based Student Response System (GSRS) is historically drawn during the reign of “iClicker” and “Poll Everywhere” to the current user-friendly application such as Kahoot! Licorish, Owen, Daniel & George (2018). Besides replacing SRS, GSRS is relatable to Novak’s meaningful learning model, which differentiate learners’ deep and surface learning approaches. The whole learning experience began with teachers’ selecting meaningful materials according to the learners’ existing knowledge followed with their initiative to engage the learners with a deeper learning instead of rote memorising. Ironically, this ideology is well reflected in Kahoot! as learners experiment, reflect and evaluate their knowledge (when answering the questions) and receives immediate feedback from the game. On top of that, Licorish, Owen, Daniel & George (2018) added that learners who were practised with deep learning strategies such as GSRS are highly engaged which resulted to them to be able to “apply their deep learning strategies to their study practises”.

**Gamification and language**

Earlier, the discussion wasn’t emphasising much on how gamification is used in learning particularly language learning. Zakaria, et. all (2018) conducted a research among the pre-service teachers enrolling in Academic Writing course in Universiti Kebangsaan Malaysia (UKM). The research focussed on implementing Kahoot! as an assessment for the course. The student’s achievement was evaluated after 14 weeks using descriptive analyses based on how well they did in Kahoot! quizzes. The highlight of the research was seen when the students in the extremely improved learners obtained 40 – 55% of improvement rates. Apart from the that, the result also proved that gamification can be used as an alternative to formative assessment in language learning. From this analysis, it is noted that the use of gamification do have impact on learning especially language learning. Interestingly, the findings also prove that even the adults can benefit from this approach.

**Kahoot! : Features and Past Studies**

Kahoot! is ranked 36th on the list of apps related for educational trends besides being one of the top 100 current apps which has been used in the classroom (Kapuler, 2015). The compliment continues as Ciaramella (2017) adds that Kahoot! benefits the educational trends with the integration of gamification approach which impacted positive pupils’ engagement. So, what is Kahoot! and what’s with the uproar and its coronation as the most hip teaching styles? By
definition, *Kahoot!* is a “free assessment program that can be used at any time of the lesson to increase the participation of the students to the lesson by the teachers and it can be used as a formative assessment as well” (Barnes, 2017). Not only that, this program requires limited instructor or student training, making it very user-friendly besides easily accessible using smartphones, computers or tablets (Wichadee & Pattanapichet, 2018). The steps in using *Kahoot!* begins with the teachers creating their own *Kahoot!* account. Once they are done, they can proceed with the material preparation based on any one of the three modes provided which according to Chotimah & Rafi (2018) involve; quiz, jumble, discussion and survey. Being the most popular among the users, quiz mode allows teachers to create unlimited questions accompanied with or without pictures or videos this include giving teachers the full authority in creating the quizzes as they can choose to restrict the answer choices to 2, 3 or 4 as well as setting the time limit for each question from 5 seconds to 2 minutes. The assessment is based on how fast the pupils can answer the questions displayed on the main screen. Even so, the pupils can only join in once they have keyed in the pin number as shared by their teacher on the main screen.

As flexible as it sounds, *Kahoot!* can be used in various ways; either (1) at the beginning of the class with the intention to identify gaps in the learners’ existing knowledge (2) during mid-class session to reinforce the concepts taught (3) at the end of the class to review and practise the concepts learnt and finally (4) as assessment either formative or summative. This visual cues in *Kahoot!* is reported to be a positive influence to the learners with learning disabilities and special education. In addition, according to Inclusive Design (2010) the visual cues with different shapes and colours combined with simple easy-to-read questions and answer format is beneficial to both group or individuals with the different learning needs. Being aligned with the 4c’s concept in 21st Century Learning, collaborative learning is visible in this apps through the player options; Player VS Player (classic) and Team VS Team (team mode). Besides that, just as explained by Flores (2015), *Kahoot!* is flowing with the elements of gamification such as leaderboards, points, feedbacks, performance graphs, and social elements/community collaboration.

The findings from a research carried out by Zarzycka-Piskorz (2016) entitled *Kahoot it or Not? Can games be motivating in learning grammar?* showed that 70% of the respondents feel motivated to learn grammar after they have played *Kahoot*. The statistics is convinced to be driven from the four common reasons behind the motivation; desire to win, to master own knowledge, playing with the others and knowing the purpose of the game which include revising, checking and consolidating knowledge. Besides that, 80% of the respondents believed that this application impacted their learning motivation because they are well aware of its purpose, which is to check, consolidate and revise their knowledge on the content.

Another research carried out by Ganesan, Idris, Yunus (2018) showed that almost 66% of the overall sample improved in a grammar test which focussed on the Simple Present Tense, while another 78% showed significance improvement on Simple Past Tense and 61% was proven to improve themselves in a test on conjunction.

**Irregular verbs learning**

Often times, the notion of ‘overgeneralisation’ has always been synonymous with irregular verbs learning. As most ESL learners are aware of, any verbs in past tense form must be added with
either -d, -ed, -ied inflections to show that the actions have taken place in the past. Hence, mistakes such as goed, eated, wented and felled keep recurring in ESL learners’ writing. The ignorance on irregular verbs form often caused ESL learners to repeat the same mistakes either in their writing or speaking attempts. According to Prapobaratanakul & Pongpairoj (2016) there are four sub-types of irregular verbs; (1) ablaut (vowel change; eg run becomes ran), (2) pseudo-inflection (from a long vowel to short vowel; eg feed becomes fed), (3) suppletive (completely different; eg go becomes went) and (4) identical forms (does not change; eg put becomes put). Steven & Alan (1994) add that, the inquisition of irregular inflection (e.g., sing – sang) is made easier with the presence of brute-force memory due to its varying degrees of unpredictability. For this reason, a child who heard of the word sang being mentioned repetitively by his parents would soon grow to be familiar of the form as the brute memory was working.

On top of that, Brown (1973) states that, unlike ESL learners, an English-speaking child, acquired irregular past tense inflection before the regular counterpart –ed . Therefore, for a non-English speaking learners, learning irregular verb form may be a bit difficult due to the non-existent of both environments. Another scenario which is related to the difficulty in irregular verbs acquisition is the interference of the dominant rules. As explained by Kuczaj (1977), once a child has achieved sufficient amount of control of the regular past tense form, he will start to make two types of errors with the irregular past tense form. He either adds the -ed suffix to an irregular generic verb form (eated) or attaches the suffix to the past tense form itself (ated). Apart from the rule confusion, mother tongue’s interference also contributed to the lack of English Irregular verbs mastery. Based on the the studies by Ashari and Munir (2015) and Watcharapunyawong and Usaha (2013) as cited by Denizer (2017), mother tongue’s acquisition has been proven to affect at least sixteen parts of English grammar which includes both regular and irregular verbs in past tense. Besides that, the findings with more than 100 verb tense errors in each scripts collected also proves the influence of the mother tongue towards the learner’s writing. Due to the aforementioned issues, this study is aimed to unravel the following research question; Does the use of Kahoot! helps young language learners in learning English Irregular verbs?

Methodology
Since the data from this research were derived solely from the comparison of pre - test and post - test data, this research is indeed a quasi - experimental research involving manipulating an independent variable without random assignment of conditions or conditions orders to participants. On top of that, this design was chosen by the researcher since the participants for this research was a class of 35 Year 3 pupils; without any controlled group. The data collection is done quantitatively instead of qualitative because the aim of this research is to examine the impact of Kahoot! towards the pupils’ memory retention of irregular verbs (Creswell & Poth, 2017). The use of Kahoot! quiz was the independent variable (X) of the research meanwhile the final score on Irregular verb quiz was the dependant variable (Y). This score, which signifies the memory retention was used as the yardstick to prove the impact of Kahoot! towards the Year 3 pupils’ irregular verbs learning. The only instrument used for this research was the Irregular verbs test which were given before and after the treatment (Kahoot! quiz sessions).
Table 1. Pretest-posttest design

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>A</td>
<td>O</td>
<td>X</td>
</tr>
</tbody>
</table>

Information of table 1:
- A: Irregular Verbs Pretest
- O: Class treatment with Kahoot!
- X: Irregular Verbs Posttest

Research Procedure
The researcher started by listing down 46 common irregular verbs, which were then translated into Kahoot!, together with appropriate picture to aid the learning process. These 46 words are chosen due to their common frequencies in English language learning. Not only that, the researcher also believed that exposing more than 46 irregular verbs may cause the participants to burn out. Hence, selecting only 46 irregular verbs are well suited to accommodate to the research aim which is to investigate the impact of Kahoot! towards memory retention of the subject matter. Before the teaching and learning process began, the pupils were asked to answer the pre-test questions, which covered the selected 46 irregular verbs in a form of 22 multiple choice questions. Once the pre-test was completed, the researcher continued on with the first lesson by explaining about irregular verbs as well as introducing the pupils to all 46 targeted irregular verbs. They were asked to copy the wordlist in their exercise book for future reference.

Immediately after the introduction, the pupils were introduced to Kahoot! Since none of them were exposed to this application before, the researcher had to demonstrate how the application works; from key-in the game pin, to creating nickname and answering the quiz questions. Once the pupils were well versed with the idea, the quiz on irregular verbs was launched and the pupils were asked to answer it in a smaller group. This practise went on every day for the whole one week, with at least 5 minutes allocated during each interaction. On the last day of the experiment periods, the researcher handed out the same questions as the pre-test for the participants to be completed.

Figure 1. Example of pupils’ Irregular verbs notes.
Data Analysis
The process began with the researcher marking all of the scripts by the participants. Once the marking process was completed, the researcher viewed the results (marks) in two ways. The first one is by listing out the marks scored by each participants in pretest and posttest. These marks were then translated into percentages. In order to verify any improvements made from both tests, the percentage from the posttest were deducted with the one from the pretest. And then, the document analysis was continued by scanning through any items from the quiz that showed remarkable differences in both pre and posttest. The second step was by recording the participants’ achievement in both test into statistical software known as IBM SPSS Statistics Version 20. Paired sample t-test was run to describe the difference in the mean before and after the use of Kahoot!. The result from the data was very significant in proving the effectiveness of Kahoot! in retaining the participants’ memory and understanding of English Irregular verbs.

Findings and Discussions

Figure 2. (1) Individually, pupils answered the Irregular verbs quiz before they used Kahoot! (2) In smaller groups, pupils were taking turns to use Kahoot!

As previously stated in the methodology section, there were 22 multiple choice questions total in both of the tests. Before proceeding with the statistical analysis, the data from the tests were translated from the document analysis. This analysis were done by transferring all of the scores for both tests into a table form using Microsoft Excel. Percentage was counted for both pretest and posttest. Since the intention of this study is to explore the impact of Kahoot! in Irregular verbs learning, the researcher needed to see there’s improvement in posttest score in comparison to the pretest scores. Therefore, the percentage from the posttest was minused with the pretest percentage.
Table 2. An excerpt Comparison of results in pretest and posttest.

<table>
<thead>
<tr>
<th>Pretest Scores</th>
<th>Percentage</th>
<th>Posttest Scores</th>
<th>Percentage</th>
<th>Improvement Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/22</td>
<td>4.5%</td>
<td>22/22</td>
<td>100%</td>
<td>95.5%</td>
</tr>
<tr>
<td>0/22</td>
<td>0.0%</td>
<td>21/22</td>
<td>95.5%</td>
<td>95.5%</td>
</tr>
<tr>
<td>3/22</td>
<td>13.6%</td>
<td>19/22</td>
<td>86.4%</td>
<td>72.7%</td>
</tr>
<tr>
<td>6/22</td>
<td>27.3%</td>
<td>14/22</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>0/22</td>
<td>0.0%</td>
<td>5/22</td>
<td>22.7%</td>
<td>22.7%</td>
</tr>
<tr>
<td>18/22</td>
<td>81.8%</td>
<td>20/22</td>
<td>90.9%</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

From this data, it shows that all of the participants showed an improvement in terms of their quiz scores before and after the use of Kahoot! Some of the participants even showed a tremendous improvement by scoring almost 96% improvement score. This was evident from those who scored either 0 or 1 out of 22 questions during the pretest. With regards to the percentage, we could also see from the excerpt that there’s a participant who only improved 9% from the initial pretest. This could be perceived as a very low improvement percentage indeed, however it is fair to conclude that this only happened because this participant has already possessed a well range schemata on Irregular verbs, which was further evident from her capability to use words that other don’t know yet. Therefore, it only made sense that she didn’t show much improvement as compared to others.

An analysis according to each items was also conducted to conclude if there’s any particular significance to the intervention. The most striking result was perceived in item number 17.

Table 3. Item number 17 in the pretest and posttest

17. What is the past tense of “CUT”?  
A cutted  
B cuts  
C cutting  
D cut

Based on the document analysis, during pretest, only 2 out of 35 participants managed to answer this question correctly. Ten out of 35 participants chose cutted, while 16 out of 35 answered cuts and the remaining 7 answered cutting. This confusion might occur due to fact that some irregular words normally undergo changes such as in terms of vowels or additional inflections such as -ed. To top that off, there are not many words who shares the same formula as this word; cut. Therefore, it is either they know about it or they don’t. However, tremendous change was obtained from the posttest when 29 out of 35 participants answered cut as the past tense of cut. Meanwhile, only 1/35 chose cutted, leaving 5/35 answered cuts and 0/35 answered cutting. Another item that showed massive improvement would be item number 18. During the pretest, only 5 out of 35 participants manage to answer this item correctly, however the table turned during the posttest screening when 25 out of 35 participants managed to remember the correct past tense form of the irregular verb; choose. With no other exercise but Kahoot! practises, the link between the use of this application and memory retention is more apparent and obvious. This achievement could be
related to Steven & Alan’s (1994) ideology that the inquisition of irregular inflection (e.g., sing –
sang) is made easier with the presence of brute-force memory. In this very situation, the
participants who were repetitively exposed to the word cut during Kahoot! sessions were evident
to find retaining the information a lot easier as their brute memory was working well throughout
the process.

Table 4. Item number 18 in the pretest and posttest

18. What is the past tense of “CHOOSE”?
   A choose
   B choosing
   C chosen
   D chose

In order to further support the data from the document analysis, the researcher keyed in the result of pre-test and post-test into SPSS to get the mean value, standard deviation value, t-value and significance value. The result for the aforementioned statistics are as follows:

Table 5. Comparison of results in pretest and posttest.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest Score Section A</td>
<td>35</td>
<td>5.57</td>
<td>5.089</td>
<td>-12.708</td>
<td>.000</td>
</tr>
<tr>
<td>Posttest Score Section B</td>
<td>35</td>
<td>17.29</td>
<td>5.039</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A paired sample t-test was conducted to compare the pretest and posttest result on the Irregular verb quizzes. There was a significant difference in the scores between pre-test (mean=5.57, s.d=5.089) and post-test (mean=17.29, s.d = 5.039); (t = -12.708, p = .000).

The result from this table showed greater difference in terms of means for the post-test. This statistic proved that the pupils’ performance was improving over the treatment given during the experimental period. From the result displayed in Table 3, the value of sig (p) paired sample t test is 0.000 which is less than 0.05. Therefore, it can be concluded that Ho is rejected, which indicated that there was significant difference after the pupils were exposed to the use of Kahoot! in learning (to remember) about English Irregular verbs.

The effectiveness of Kahoot! in retaining the participants’ memory of the Irregular verbs could be related to the features embedded in the application and its relevance to the younger learners. Apart from the aforementioned significant features, another element which made this application stand out is its capability to maximise the users’ engagement as agreed by Ciaramella (2017). On top of that, Zarzycka-Piskorz (2016) reiterates that Kahoot! helps to heighten one’s motivation to learn as well. The researcher found these two claims to be true based on his observation of the participants’ behaviour throughout the process in which they were observed to be very engaged and motivated. This experience also proved Hussein’s (2015) statements on gamification domains that there is a high chance that this achievement is also driven from the
lowered affective filter resulted from the concept of gamification. Traditionally, learning grammar is mostly terrifying to any second language learners.

**Conclusion**

To sum up, the results from this research advocates that Kahoot! can be very impactful in helping the younger English language learners especially the nine year olds to retain their memory on English irregular verbs. Furthermore, the findings from this research also suggest that gamification is among the current teaching tool which can be very effective in enhancing the teaching and learning experience.

Apart from the aforementioned strength of this research, this research could be the start of implementing gamification in handling other parts of English grammar. Therefore, it is recommended that the future replication of this research to be conducted in a larger scale context. Among other concerns would be the existence of stable internet connection as well as sufficient netbooks or mobile devices for the process to take place.

However, there are a few suggestions which could be taken into considerations to make the result of this research more reliable. Firstly, a larger scale approach can be adapted in ensuring that the reliability and validity of the research. This could be done by having a few classes involved at once in the similar research, instead of just a class of 30 – 40 pupils. Secondly, there should be a record of observations for each Kahoot! sessions conducted instead of just the comparison between pretest and posttest. Another modification which can be looked into is the nature of the research itself. As this one involved mostly the subject teacher taking both roles as the teacher as well as the researcher, it would be great to have another researches which separates the teachers and the researchers, which could be very helpful in making sure that the data collected are not tainted with personal view or attachments to the participants. Regardless of the shortcomings, this research has done justice in proving the potential of Kahoot! in aiding learning, especially when it comes to retaining the information.

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Conversation Analysis: Opening Sequences and Ritual Expressions of Informal Mobile Phone Calls between Saudis

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Abstract
Much work of studying opening conversations has been conducted on landline telephone calls; whereas, mobile phone conversations have received less attention by researchers despite of the dominance of using mobile phone in our social life. Informed by conversation analysis (CA) approach, this study aims to identify the opening sequences and ritual expressions of informal mobile phone conversations among Saudi friends and relatives. Another goal is that to identify whether the opening sequences of mobile phone are similar or different from the landline telephone. The study will answer the following questions: what are the opening sequences and ritual expressions of mobile phone? And what are the similarities and differences between mobile phone and landline telephone in terms of the opening sequences. Thirty audio-recorded and transcribed mobile phone conversations served as the data source for this study. Data were analyzed qualitatively and quantitatively by using the CA approach. Findings showed that the majority of opening sequences of mobile phone calls were reduced to three sequences: summons answer, greeting exchanges, and how-are-you exchanges due the impact of caller ID. In addition, the sequence of identification/recognition can be found when the caller does not know the callee or the number is silent. Therefore, mobile phone and landline telephone have similarities and differences in the opening sequences in general. However, the differences observed can be a reason of the cultural practices for language use more than the effect of medium used in communication such as landline telephone and mobile phone in Saudi Arabic. Finally, more data are needed to investigate gender differences.

Key words: Conversation analysis, mobile phone calls, opening sequences, ritual expressions, Saudi Arabic

Introduction

This study examines opening sequences and ritual expressions of informal mobile phone conversations to identify the sequences and their ritual expressions used in these turns between Saudis. Another goal is to identify whether the opening sequences of mobile phone calls are similar or different from landline opening sequences. Mobile phone (i.e. cell phone) had been used only by businesspeople at the beginning of this technology; however, it has become dominant in our social life and used by adults and even children at the present (Hutchby & Barnett, 2005). It has been argued that, in the previous technological innovations, new technologies such as internet, broadcasting, and landline telephone change social life in terms of creating new forms of social interaction and social practice by producing new structures of conversations that need to be investigated based on empirical studies on naturally occurring data, rather than abstract concepts or assumptions (Hutchby, 2001; Hutchby & Barnett, 2005). Much work of opening conversations has been conducted on landline telephone conversations that began with Sacks’ lectures on conversations on telephone calls made to an emergency psychiatric hospital and Schegloff (1968, 1972, 1979, 1986, 2002) on various topics on opening conversations on telephone such as sequences, identification and recognition, and routine. Schegloff (1968, 1979, 1986) identifies the four canonical sequences in opening American telephone calls; a summons answer sequence, identifications/recognition, greetings, and exchange of how-are-you based on northern American data (i.e. Anglo-Americans). However, Schegloff (2002) acknowledges that he had no opportunity to examine data on the use of any devices (e.g. cell phones, mobile phones, and car phones), and did not study telephone as an object of inquiry. He is wondering the sequences of caller ID which is pervasive and one of the characteristics in mobile phones and mentioning that “we have no studies that I am aware of that tell us what the consequences of caller ID have been for the actual conduct talk on the telephone, and their openings in particular” (Schegloff, 2002, p. 293). Also, Schegloff (2002) adds that, in his words, “caller ID could change the asymmetries of information noted about past telephone interaction by making it possible for the recipient to know something before lifting the receiver” (p. 293).

Mobile phone has some features that distinguish it from landline telephone, or at least at the period of Schegloff’s studies on telephone such as caller ID, mobility, creating a particular ring for specific persons, and blocking callers (Schegloff, 2002; Weilemann, 2003; Hutchby & Barnett, 2005; Arminen & Leinonen, 2006). The caller ID and mobility are more pervasive in mobile phone than landline telephones. Caller ID function may affect the sequence of identification/recognition due to identifying the name of caller before answering the phone (Schegloff, 2002). Thus, the ordered sequences of opening conversations may change. Another difference is that the mobile phone is more personal; whereas, landline is usually shared by family members or colleagues in work offices (Arminen, 2005).

Hutchby and Barnett (2005) investigate the sequential organization of mobile phone conversations on British data and find out that the sequences of opening in mobile phone talk are similar to landline phone talk. This study raises a hot debate between Hutchby (2005) and Arminen (2005) about Hutchby and Barnett’s results and their claims for the similarities between mobile phone and landline telephone. As a result, Arminen and Leinonen (2006) conduct a study on opening practices in Finnish mobile call openings. They notice that the opening sequences of mobile phone differ from landline telephone opening. This dispute of whether the mobile phone is
similar or different from landline telephone and the dearth of studies on this topic require more investigation based on conducting empirical studies that is one of the goals for this study besides identifying the ritual expressions of these sequences.

Therefore, this current study attempts to examine and identify the sequences and ritual expressions of opening in mobile phone calls between Saudis to understand the linguistic behavior in mobile phone calls in particular and in Arabic in general. Another goal is to identify whether the opening sequences of mobile phone are similar to or different from opening in landline telephone talk.

**Literature review**

This part encompasses three parts of previous research related to the current topic. The first part will display the results of earlier studies on opening landline telephone conversations and demonstrate the issues of claiming universal structures and across cultural differences to understand the structure or sequences of opening in depth. The second part will review the earlier studies on mobile phone calls. The final part will display the earlier studies on greetings in Arabic because of having the ritual expressions of opening conversations that are mainly related to one of the goals in this study, but the medium is different. The studies of Arabic greetings have been on face to face communication while the current study is on mobile phone communication.

**Opening Telephone Conversations**

Analyzing telephone conversations, as mentioned earlier, began with Sacks’ (1992) lectures on conversations on telephone calls made to an emergency psychiatric hospital and Schegloff (1967, 1968, 1979, 1986). Schegloff (1968, 1979, 1986) identifies the four canonical sequences in the opening of North American telephone conversations based on analyzing 500 telephone conversations: (1) a summons/answer sequence (the telephone rings and the first response is uttered by the answerer), (2) an identification/recognition sequence (each party identifying self and displaying recognition of the other), (3) a greeting sequence (an exchange of greeting tokens), and (4) a how-are-you sequence (a pair of pairs in which each participant poses an initial inquiry). These opening sequences are the majority of sequences in the American data. Also, he indicates that Americans prefer identification by other recognition, rather than by explicit self-identification.

When Schegloff identified the canonical opening of telephone, he did not claim the universalness structure for his model that was misunderstood by many researchers working on across cultural studies such as Godard (1977) and Sifianou (1989). They argue that the structure of telephone openings differ across language communities. In contrast, Hopper and Doany (1989) and Hopper, Doany, Johnson, and Drummond (1991) claim universal structures for Schegloff’s model.

From that brief history about Schegloff’s canonical model of opening and the claims of others towards universal structures and the cross cultural differences, many languages have been studied by researchers to contribute to the topic. Some studies of opening telephone calls are comparative such as French and American English (Godard, 1977), British English and Greek (Sifianou, 1989), English, French, and Arabic (Hopper & Doany, 1989), Japanese and Korean (Park, 2002), Australian and German (Grieve & Seebus, 2008). The other studies, which are not comparative, are Arabic (Schmidt, 1975; Saadah, 2009), Spanish (Hopper et al., 1991; Coronel-Molina, 1998), Dutch (Houtkoop-Steenstra, 1991; Houtkoop-Steenstra, 2003), Swedish (Lindstro¨m, 1994),
Chinese (Hopper & Chen, 1996; Sun, 2004), Persian (Taleghani-Nikazm, 2002), and Greek (Sifianou, 2002).

Godard (1977) claims considerable variation between cultures and compared between French and American English. She concludes that there is a difference between these two languages which is that French caller checks the number first and must name himself/herself because it is considered impolite in the French culture. An American caller, in contrast, does not check for the number but questions the answerer’s identity for checking. Thereafter, she reports the steps in opening telephone conversations in French: check number, name oneself at the first opportunity, and excuse oneself (optional in case of intimacy). However, these steps are generalized reconstructions, and Godard did not provide any examples of these sequences. Rather, she relies on her experience and intuition as a member of French culture. Hopper and Doany’s (1989) findings differ from Godard’s descriptions in some details about French.

Hopper and Doany (1989) argue for the universal structure of canonical opening telephone conversations and examine this aspect in three languages: English, French, and Arabic (i.e. Lebanese Arabic). These languages show similarity in opening sequences. They point out that the word *allo* in French and Arabic (a linguistic borrowing term in Lebanon), like *hello* in English, are used frequently as a first response to summons. Also, it is discovered that it is used by Iranians (Taleghani-Nikazm, 2002) and sometimes by Dutch (Houtkoop-Steenstra, 1991). *Allo* is not used in face to face communication neither in French nor in Arabic. The second sequence is identification/recognition that was achieved by recognition of the answerer, i.e. by uttering the answerer’s name that is different from Godard’s results. The researchers generalize that summons/answer must occur first and then follow mutual recognition, which occurs in or after answering the summons.

In contrast, Schmidt (1986) finds that telephone conversational openings of Egyptian Arabic which is Cairene Arabic differ from French and Americans. He analyzes one sample that was taken from a corpus of 215 telephone opening recorded in Egypt with no providing any information about the participants and their relationship. Schmidt reveals that the caller used *alo* ‘hello’ responding to the *alo* of the answerer. Also, the answerer uses *alo* again in the third turn of the conversation making a series of hellos that may occur with poor connection or when the answerer picks up the receiver and does not say anything immediately. However, it occurs here as demanding the caller to identify himself/herself. Schmidt comments by saying that identification is problematic in Egypt because neither answerer nor caller provide any self-identification before assuring the identity of each other. This strong reluctance from caller and callee indicates the difference between Egyptians and Americans. In general, it is similar to Americans in terms of the same categories of the sequences: summons answer, identification, greeting, and introduction of message. Schegloff (1986) uses Schmidt’s Egyptian Arabic sample and suggests that the inter-cultural differences of opening organization are not strong.

However, like English and Spanish, Arabic is a pluricentric language, which encompasses national varieties (Schneider & Barron, 2008); therefore, the researcher of this article assumes that Lebanese Arabic and Cairene Arabic may not represent the social practices of all Arabic varieties. For instance, the variety of American English (Halmari, 1993), British English (Sifanou, 1989),
and Spanish in Northern Mexico, Spain, and Paraguay (Hopper et al., 1991) display variation in opening telephone. In American Business calls, for instance, Halmari (1993) reports that the exchange of personal names is optional. Sifanou (1989) observes that, in England, callees recite their names and sometimes their last names beside hallo. Although Hopper et al. (1991) ascertain the universal structure of telephone openings, they acknowledge that the differences across languages and cultures occur. For instance, Hopper et al. (1991) mention that Johnson, who is one of the researchers in the study, conducts a survey on different Spanish-speaking countries: Bueno (Northern Mexico), Digame (Spain), and Hola (Paraguay) and encounters differences in telephone openings as they mention in the study. However, they do not provide the examples of the differences. They justify their position on the grounds that the differences are similar in functions. Similarly, Coronel-Molina’s study (1998) finds unique sequential variation in Spanish in Latin American countries (Chile, Cuba, Mexico, Panama, Peru, and Puerto Rico) and insist in falling of Hispanic conversational norms within Schegloff’s canonical schema of universalness.

Sifianou (1989) compares between British English and Greek in the sequences of opening telephone calls. She mentions that answerers use ne ‘yes’ or verbs like speak and go ahead as a summons answer in Greek, not like hello in the USA or hallo in England. Also, the results show that Greek callers do not introduce themselves, i.e. no overt identification. In contrast, answerers in England, recite their phone number and use self-identification that is sometimes offered by last name. Furthermore, Sifianou (2002) also conducts another study on the same topic on Greek. She states that the four canonical patterns occur when the relationship is distant between callers and callees. In contrast, the frequent patterns between closely related interlocutors are only two main sequences: summons answer and how-are-you. In formal relationship, self-identification follows greeting, but greeting is considered not essential among intimates on telephone conversations. Unlike Greek, Taleghani-Nikazm (2002) demonstrates that the four canonical sequences occur in both formal and informal calls in Persian. Finally, the expressions of greetings like health to you and health are used more frequently whereas good morning and good evening are used less frequently in Greek.

Park (2002) examines recognition and identification in Japanese and Korean. The researcher notes that they prefer self-identification over other recognition, which is often followed by the reason of call. This preference is similar to Dutch (Houtkoop-Steenstra, 1991) and Swedish (Lindstro¨m, 1994). Dutch begins the call with self-identification which is preferred by nick name, first name only, last name only, marital status, or full title. Thus, Dutch people sometimes use hello. However, Swedes use a variety of responses besides self-identification, which is used by first or last name when answering the telephone. For example, they use other recognition, greeting and self-identification, station identification (phone number) and hallo ‘hello.’ Swedish is similar to Americans in using other recognition and like Dutch in using self-identification. However, it is unique that how are you is considered optional in Swedish. Houtkoop-Steenstra (2003) conducts another study on Dutch but goes beyond analyzing the structure of opening of conversations in isolation from the influence of social factors. She analyzes gender differences in terms of identifications and the forms that they use for identifying themselves. She states that women use hello to protect their privacy; thus, they withhold self-identification. However, the difference is not significant in comparison with men. Another difference is that women say Mrs. Last name, but no men say Mr. Last name. Houtkoop-Steenstra mentions that the background of this difference is
not clear. The same goal in terms of studying gender differences in opening telephone call is examined by Grieve and Seebus (2008) in Australian and German. They illustrate that men use self-identification more than women in business calls. It means that both males and females use self-identification, but they differ in frequency.

In Chinese, Hopper and Chen (1996) find that the ordered tasks of Schegloff’s analysis occur in telephone openings of Mandarin speakers in Taiwan: summons answer, identification/recognition, and greeting pairs. Similarly, Taleghani-Nikazm (2002) reports the same sequences of American telephone openings produced by Iranians in both formal and informal calls. However, Hopper and Chen (1996) note a variety of greetings used based on the interpersonal relationship between caller and callee in Chinese. For instance, intimates use tag-particle /a/ attached to names; whereas, non-intimates use the particle /ei/, and the particle ni hao with unacquainted people. Intimate callers sometimes speak before the beginning of answerer, which is rare. However, it is a phenomenon and used commonly in mobile phone calls (Hutchby & Barnett, 2005). This result emerges against the first part of Schegloff’s rules which postulate that the answerer speaks first, and then the caller provides the first topic. Besides using a variety of greetings in Chinese, Sun (2004) observes that Chinese also use a variety of forms for inquiring that are inadequate for English semantic categories of phatic talk.

In Persian, Taleghani-Nikazm (2002) shows that identification is affected by social status in using forms. For instance, other identification is achieved by using last name preceded by an address term. If the answerer knew the caller, the response will be alo salam ‘hello, peace’ in the summons answer. In how-are-you sequence, inquiring is repeated by using different lexical items to show interest in others. Like Persian, Saadah (2009) highlights the same repetition of how are you in Arabic between family members to show more intimacy and interest in callees. Also, in Hispanic etiquette, Coronel-Molina (1998) mentions that callers should inquire each other’s family members to show his/her interest. However, when the relationship is not intimate, the plural you is used instead of using the singular you in Persian. In contrast, Turjomman (2005) states that talking to elders is addressed in plural to show respect for them in Saudi Arabic.

Grieve and Seebus (2008) work on Australian and German and compare between opening private and business telephone calls. The results show that Germans use self-identification more than Australians. Australians use self-identification more frequently in business than private calls. Hello and hi salutations occur more in private calls than Business calls. Salutations, like hello and hi, are used more than good morning and good evening. Australian callees include a salutation more than Germans.

To sum up, the previous studies explore similarities and differences in the sequences and ritual expressions of opening telephone conversations across cultures. In addition, opening is affected by various factors such as language, culture, relationship, goal of call, etc. However, the majority of explored differences of opening sequences still fall in Schegloff’s model irrespective of the existence of all the four sequences of opening in general. Finally, even if the inter-cultural differences are not strong (Schegloff, 1986) or the differences are similar in the function (Hopper et al., 1991), they need to be studied to better understand other languages, but beyond the concept of universalness.
Mobile Phone Calls

Social scientists have contributed to studying numerous areas related to the use of mobile telephony in our social life, e.g. Brown, Green, and Harper (2002) and Katz and Aakhus (2002). However, their concerns are beyond studying the nature of social practice; that is, talk in interaction. Brown et al. (2002) focus on topics such as social and technical problems related to the use of mobile phone and mobile communication. Katz and Aakhus’s volume (2002) rely on interviews and questionnaires in most of the studies that are about mobile users and their preferences for cell phones. Some other contributions are made by Murtagh (2002) and Weilenmann and Larsson (2002) in analyzing the nature of interaction in mobile phone, but the data are collected by ethnographic observation and informant report, not by recording. However, there are a few conversation analysis studies that have been conducted on studying mobile phone conversations by using recording to describe and analyze either recording or naturally occurring data, such as Laurier (2001), Weilenmann (2003), Hutchby and Barnett (2005), Arminen and Leinonen (2006), and Laursen and Szymanski (2013). Laurier (2001) examines the formulation of location that are performed in mobile phones by traveling workers to other mobile and non-mobile office locations that are not related to this topic.

Weilenmann (2003) investigates not only the formulation of availability and location but also the identification and recognition between teenage mobile users in Swedish. The researcher finds that the sequence of identification and recognition is similar to the Swedish landline calls that are described by Lindstro¨m (1994). For example, self-identification by name is also exist on mobile phone, and there are no cases showing that the callee recited the name of caller due to the Caller identification function that the researcher assumes its impact on identification.

Hutchby and Barnett (2005) compare mobile phone and landline calls focusing on pre-voice identification and location inquiry in British data. They reveal that there are similarities and differences in the sequences of openings. The differences indicate new interaction sequences in routine conversations by mobile telephony. For example, an answerer can identify the caller by the caller ID function, which is called “pre-voice sample caller identification,” and recite his/her name instead of the summons answer. It means that it creates a new sequence in opening. This result is not observed in Weilenmann’s results. Caller, in most of the cases in their data, speaks first that is a result of certain technological affordances of mobile telephones. As mentioned in the previous section, this phenomenon is similar to Mandarin speakers in Taiwan; however, it is established that callers speak first between intimate partners in a large number of instances in landline telephone (Hopper & Chen, 1996). According to Hopper and Chen (1996), “the Taiwanese author/informant speculates that the caller speaks first to display some sense of urgency” (p. 305). It is obvious that the phenomenon of callers in terms of speaking first is related to mobile phone in the British data, but in Taiwan it is related to the culture. Finally, despite the differences mentioned above, Hutchby and Barnett (2005) still claim that that the modifications are not pervasive or obvious.

In contrast, Arminen and Leinonen (2006) confirm that the opening conversation of mobile phone differs from opening in landline calls in Finnish, unlike Weilenmann (2003) and Hutchby and Barnett (2005). Arminen and Leinonen notice that the sequences are reduced and the call starts with greeting, which is canonical with known caller, and topic initiation in mobile phone call. In
Another study is supporting the results of Arminen and Leinonen (2006) in terms of the differences in general. Laursen and Szymanski’s results (2013) of mobile phone conversations from the United States and Denmark point out that identification and recognition are infrequently used when location inquiries are made. Also, they confirm that location talk is used frequently in opening sequences as a reason for the call. In addition, they show that the organization of sequence is as follows: greeting exchange, how-are-you exchange, and where-are-you inquiries or reports of location. However, the extracts of their conversations display self-identification and other recognition which is not clear whether the recognition is by voice sample or the caller ID because the researchers do not investigate that. Probably, their focus is only on investigating the formulation of location in mobile phone conversations.

Finally, the results of the previous studies show similarities and differences between mobile and landline telephone in the sequences of opening in Swedish, British, Finish, United States, and Denmark. Based on the limited number of studies on opening mobile phone conversations and the different claims we have, there is a need for more studies to better understand this topic. Also, we need to know whether the differences are related to the mobile phone or language and culture.

Greetings in Arabic

Studying the ritual expressions or formulas of greetings in Arabic have been examined widely in face to face communication either in Saudi Arabia (e.g. Hassanain, 1994; Turjoman, 2005) or in other Arabic speaking communities, e.g. Morocco (Mercier, 1957), Syria (Ferguson, 1976), Yemen (Caton, 1986), Oman (Emery, 2000), Iraq and Jordan (Gorgis & Al-Quran, 2003), Jordan (Hazaymeh, 2012; Darwish & Bader, 2014), and Gulf Arabic (Alharbi & Al-Ajmi, 2008). Greetings have types that are listed by Hazaymeh (2012) such as religious, rural, morning/evening, English, and marhaba ‘welcome’ and ahlan ‘welcome’ patterns. Choosing a particular type pattern is affected by a number of factors, viz. environment, Islam, education, media, contact with the West, and relations (Hazaymeh, 2012). The previous studies of greetings in Arabic indicate similarities and differences in using the patterns of greetings and their frequency.

In the previous studies, almost all the results assure that the Islamic greeting assalaamu ʕalaykum ‘Peace be upon you’ and its response wa ʕalaikum assalam ‘Peace be upon you too’ are most frequently used in greeting (Ferguson, 1976; Caton, 1986; Hassanain, 1994; Emery, 2000; Gorgis & Al-Quran, 2003; Turjoman, 2005; Alharbi & Al-Ajmi, 2008; Hazaymeh, 2012; Darwish & Bader, 2014). This short form of greeting can be used with a long form assalaamu ʕalaykum wa rahmatu allah ‘(May) peace and God’s mercy be upon you’ or assalaamu ʕalaykum wa rahmatu allah wa barakatuh ‘(May) peace and God’s mercy and blessings be upon you.’ Similarly, in response, the form can be performed like wa ʕalaykum assalaamu wa rahmatu allah ‘(May) peace and God’s mercy be upon you too’ or wa ʕalaykum assalaamu wa rahmatu allah wa barakatuh ‘(May) peace and God’s mercy and blessings be upon you too.’ According to Turjoman (2005), the latter form is only used by people who are over 50 in Saudi Arabia. Surprisingly, Alharbi and Al-Ajmi (2008) find that the greeting form assalaamu ʕalaykum ‘Peace be upon you’
has a dual function; that is, it is used as a greeting and parting in Gulf Arabic, e.g. Kuwait, eastern province of Saudi Arabia, Qatar, Bahrain, the UAE and Oman.

Based on the Islamic principles and credo in the Holy Quran, Muslims must respond to the greeting by better one or return it. Allah says “When you are greeted with a salutation then return it with a better one, or at least the same. Surely Allah takes good count of everything” (The Holy Quran, 4: 86). Although this greeting is only used by Muslims, Darwish and Bader (2014) report that it is also used, but rarely, by Christians when greeting Muslims to show respect and solidarity for them in Jordan. In Morocco, Mercier (1957) concedes that Muslims use the response wa alaikum ‘And upon you too’ when they are greeted by non-Muslims¹ (as cited in Ferguson, 1976). In contrast, Gorgis and Al-Quran (2003) point out that the response wa alaikum is also used by Iraqis and Jordanians. However, they provide no information about their participants, i.e. whether they are Muslims or not to be able to identify the backgrounds of users for this greeting response.

In addition, Gorgis and Al-Quran (2003) discover that Iraqis and Jordanians use the greeting form salam ‘Peace,’ and the same result also is asserted by Hazaymeh (2012) in Jordanian Arabic. However, Turjoman (2005) emphasizes that form is used only by youngest age group and one female middle age in Saudi Arabia. Also, it is proved in Yemeni greetings with a unique greeting exchange. For instance, Caton (1986) remarks a unique exchange of greetings between tribesmen in Yemen, e.g. salam tahiya ‘Greetings of long life’ and its response that is ablag-t ‘I am fulfilled or satisfied.’

The other common forms of greetings that are used in the mentioned Arabic speaking communities are marhab ‘welcome’ and temporal or time bound greetings, e.g. sabah ilkhair ‘good morning’ and masa ilkhair ‘good evening’ (Ferguson, 1976; Caton, 1986; Emery, 2000; Gorgis & Al-Quran, 2003; Hazaymeh, 2012; Alharbi & Al-Ajmi, 2008). Marhab ‘welcome’ is a classical Arabic formula (Emery, 2000; Alharbi & Al-Ajmi, 2008), and it is sometimes used with numbers that work as an intensifier for it, e.g. marhaba ‘welcome’ singular, marhabtain ‘two welcomes’ dual, and marahib ‘(many) welcomes’ plural (Ferguson, 1976; Caton, 1986; Emery, 2000; Hazaymeh, 2012; Alharbi & Al-Ajmi, 2008). According to Alharbi and Al-Ajmi (2008), marhaba is employed for greeting a visitor to the house, initiating a social encounter, or to draw someone’s attention in Gulf Arabic. However, they are used to greet busy people like in Iraq and Saudi Arabia. The intensified forms, as mentioned above, also are used as a response to marhaba ‘welcome’ or hala ‘welcome’ in some dialects like Najd in Saudi Arabia, Levantine, and Iraq (Alharbi & Al-Ajmi, 2008).

The temporal greetings, e.g. sabah ilkhair ‘good morning’ and masa ilkhair ‘good evening,’ are also commonly used by these forms. In addition, they are used by adding Allah to them to invoke God’s blessing on the addressee, e.g. massakum allah bilxer ‘(May) God bid you: good evening’ or Allah ymassikum bilxer ‘my God bid you: good evening’ in Jordanian Arabic (Caton, 1986; Gorgis & Al-Quran, 2003; Alharbi & Al-Ajmi, 2008). The goal of adding Allah in this greeting is to express more warmth and personalized sense instead of using sabah ilkhair that is the formal one (Alharbi & Al-Ajmi, 2008). Furthermore, the temporal greetings are also used by adding names of flowers or roses, e.g. sabah ilward ‘morning of roses’ and sabah ilfull ‘morning of jasmine’ (Ferguson, 1976; Hazaymeh, 2012).
Emery (2000) examines the form of three categories of politeness formulas: greeting and parting, congratulating and condoling in the northern Omani Arabic, and the social factors that can affect language use, e.g. age and gender. He describes the sequences of opening encounter of a visitor. He finds that there are three stages in greetings: greeting exchange, a health inquiry with conventional answer and thanks to Allah, and ritualized news inquiry. It is obvious that greetings are often the first utterance in the encounter in face to face interaction (Sifianou, 1989; Hopper & Chen, 1996), whereas expressions like hello, yes, or self-identification are commonly used in initiating telephone conversations, which may differ based on language and culture. Hello, for instance, is also used as a greeting in both telephone and face to face encounter in English. The main reason beyond the difference is that the mutual identification and recognition occurs visually through pre-speech moments in face to face conversation; however, they are achieved verbally in speech in a telephone conversation (Hopper & Doany, 1989; Hopper & Chen, 1996). This difference between face to face talk and landline telephone has changed with the caller ID function in which the caller can start with greeting because of the available information of caller, e.g. Finish’s data (Arminen & Leinonen, 2006). However, the absence of non-linguistic cues is still the main difference between these two types of communication (Sifianou, 1989; Hutchby & Barnett, 2005).

To sum up, greeting formulas are loaded with sociocultural values and religious beliefs in Arabic speech communities. In addition, the use of forms is affected by various factors, e.g. age, gender, region, and religion.

Methodology

**Research Questions:**

1. What are the opening sequences and ritual expressions of mobile phone calls between Saudis?
2. Are the opening sequences of mobile phone calls similar to or different from landline telephone calls?

**Participants**

The participants are 32 Saudi friends and relatives, 20 males and 12 females. The majority of participants were in their twenties and thirties with different educational backgrounds. All the male participants are from the South and middle of Saudi Arabia (SA); however, the majority of them live in the middle of the country. All the female participants are from the South, but the majority live in the middle of SA. They represent Saudi Arabia in general and the middle and the south of SA in particular.

All the Saudi male participants were in the United States at the time of recording except one participant in Malaysia and three relatives in Saudi Arabia. All the Saudis who were in the United States were graduate students except for two: one of them was an undergraduate student and the other one was in the United States for non-degree study or other purposes (i.e., he was on a military course in Texas). The Saudi participant in Malaysia was a graduate student. With regard to the educational background of the other three relatives in Saudi Arabia, they have the General Certificate of Secondary Education except one who has the Certificate of Intermediate Education. All the females were in Saudi Arabia except for the researcher’s wife who was in the United States.
The females also differed in their educational backgrounds (e.g. eight females have the General Certificate of Secondary Education, one female has the Certificate of Elementary Education, and three females were illiterate).

**Data**

A corpus of thirty calls from mobile to mobile phone was recorded by a voice recorder program in a mobile phone by the researcher, and two female assistants (his wife and sister). The participants were invited to participate in this study because they were available for recording to achieve the purpose of the study. Also, the goal was explained to the participants by calling the relatives in Saudi Arabia and by sending text messages to the friends in the U.S.A. All of them gave their consent for recording in advance except three participants gave the consent during the call because they did not receive the text message. One of the Saudi males refused to participate in this study, so he was excluded, and he is not included in the total number of male participants. The calls were conducted with the same sex, i.e. the conversations were between men and between women. All the names were anonymized by using random names for the participants except the name of researcher in all the shown extracts in the results. All the calls were made just for saying hello.

The researcher recorded all the men calls by Nokia N 96, and the researcher acknowledges that he initiated 13 calls where he was a caller in them. In addition, the researcher was a callee in seven calls where the calls were initiated by seven participants. The participants were 15 friends and five relatives. 16 calls were domestic in the U.S.A, but four calls were international, e.g. three calls were from the USA to Saudi Arabia, and one call was from the USA to Malaysia. By using the same device, the researcher’s wife, the first assistant, recorded and initiated six international calls from the USA to Saudi Arabia, where she was a caller in them. The second assistant, the researcher’s sister, recorded and initiated four domestic calls by Galaxy Note One in Saudi Arabia. The two assistants recorded all calls between female participants, who were only relatives of the researcher.

The researcher transcribed only the part of opening and closing for the mobile calls by using the convention transcription of Gail Jefferson (see Appendix A). Because of the limited space, the researcher worked only on the opening part in this study. There are two lines for the transcript of conversations. First, the top line indicates the original words of the caller or callee. Second, the bottom line is the English translation of the original words. The data are research generated data, not naturalistic data, because of the difficulty of recording naturalistic data. Therefore, the researcher invited the participants to participate in the current study. The data were analyzed qualitatively and quantitatively to achieve the goal of study.

**Results**

This part includes one main section: opening sequences and ritual expressions of mobile phone conversations to display the results of analyzing the 30 informal mobile phone calls between Saudi friends and relatives, i.e. 20 male conversations and 10 female conversations. The section shows the sequences and ritual expressions of mobile phone conversations: summons answer sequence, greeting exchange, identification/recognition, and the sequence of “how are you.” The extracts of conversations will be used to show the sequences and tables to show the ritual expressions that
Conversation Analysis: Opening Sequences and Ritual Expressions

Mahzari

were used in these sequences. The tables were divided in two parts: the left side shows the ritual expressions used by the participants and the right side shows what was used by the data recorders, i.e. the two female assistant and the researcher, to avoid the repetition that can influence the final results of the frequency of ritual expressions.

**Opening Mobile Phone Calls**

Based on analyzing the sequences of opening mobile phone calls, it was found that the majority of calls included only three sequences: summons answer, greeting exchanges, and the exchanges of “how are you,” except 3 calls included the identification/recognition sequence beside the other three sequences. Extract² (11) shows an example for the common three sequences of opening mobile phone calls in the data (the researcher was the callee in this call):

Conversation # 11 (it was between two friends)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 01 | Callee: Mohammad  
 Hello |
| 02 | Caller: Ahmad  
 (0.1) |
| 03 | Callee: M  
 assalamu alaykum  
 Peace be upon you |
| 04 | Caller: A  
 wa alaykum assala::m wa rahmatu allah wa barakatuh  
 ahlan wa sahlan  
 peace and God's mercy and blessings be upon you too, welcome, welcome |
| 05 | (.) |
| 06 | Caller: A  
 kayf alha::l=  
 How are you? |
| 07 | Callee: M  
 =alla::h yisallimk bashshirna ank ya abu fahad  
 May God keep you safe and sound, any good news about you, father of Fahad |
| 08 | (.) |
| 09 | Caller: A  
 wallah (.) nizgah (.) asakum tayibeen=  
 I swear by God, (we’re) fine; I hope you are fine too |
| 10 | Callee: M  
 wallah abashshirk bkhai::r asak bkhair  
 I swear by God, the good news I tell you is that I am fine; I hope you are fine |

As shown in line one, the callee answered the call with *alo* ‘hello’ as a summons answer. In turn 3 and 4, the caller and callee exchanged the greetings. The caller’s greeting was *assalamu alaykum* ‘Peace be upon you’ that was responded by the callee, e.g. *wa alaykum assalam wa rahmatu allah wa barakatuh, ahlan wa sahlan* ‘Peace and God's mercy and blessings be upon you too, welcome, welcome.’ The final main sequence was how-are-you sequence as shown from line 6 to 10. In line 6, the caller asked the callee by saying *kayf alha:* ‘how are you?’ and the callee responded by using a prayer and employing *how are you* at the end of his response in line 7, e.g. *allah yisallimk bashshirna ank ya abu fahad* ‘(May) God keep you safe and sound, any good news about you, father of Fahad?’ *Father of Fahad* is an address term for the caller, which was used as a polite strategy with the caller. In line 9, the caller responded by saying *wallah nizgah* ‘I swear by God, (we’re) fine.’ The positive response, i.e. *nizgah* was intensified by *wallah* to stress or confirm the meaning of *fine*. In the same turn, the caller also employed another *how are you* inquiry such as *asakum tayibeen* ‘I hope you are fine too.’ This form is often understood as a question although it is affirmative with no question particle or intonation. In other words, the meaning of inquiry for that form is *are you fine? I hope you are fine*. In turn 10, the callee responded to that
inquiry *wallah abashshirk bkhair asak bkhair* ‘I swear by God, the good news I tell you is that I am fine, I hope you are fine too.’ Also, the callee used *wallah* to intensify the meaning of his response, which is similar to what was used by the caller in line 9. In addition, the callee used the word *abashshirk* which literally means ‘tell good news’ (English translation: ‘any good news to tell about you’) but its meaning is used for telling good news. This extract reflects the majority of opening sequences in the current study data as mentioned above with some examples for the ritual expressions that were used in these sequences.

The results of examining the opening sequences for all the data will be shown in depth with their extracts in the following sections: the summons answer sequence, greeting exchanges, identification/recognition, and exchange of *how are you.* Also, the ritual expressions that were used in each sequence will be identified. The first part will be about the summons answer sequence and the expressions that were used as a summons answer.

**Summons Answer Sequence**

The mobile phone’s ring (i.e. the summons) and the answer of this summons constitute the first adjacency pair of the first sequence in the mobile phone conversations. Based on analyzing the opening sequences of the 30 mobile phone calls, the researcher noticed that the callees/answerers answered the mobile phone call in three different ways: using greeting, *hello,* and reciting the name of caller by using an address term as a summons answer (see Table 1).

Table 1 shows the ritual expressions used as a summons answer by participants and data recorders when they were answerers in the calls. The total number of conversations that have summons answer was 27 conversations. The total number of conversations, where the participants were answerers, were 20 conversations (13 for male and seven for female participants). In the other three female conversations, the female data recorders spoke first by exchanging greetings immediately, so there was no summons answer in that conversations. Finally, there were seven conversations where the researcher was an answerer, not a caller, and the researcher coded himself as “male data recorder” (see Table 1).

*Table 1. The Frequency of Summons Answer Expressions*

<table>
<thead>
<tr>
<th>Expressions</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorder</th>
<th>Female data recorders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>hala/marhaba</em> ‘welcome’</td>
<td>8 (72%)</td>
<td>3 (27%)</td>
<td>11 (55%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>alo</em> ‘hello’</td>
<td>4 (50%)</td>
<td>4 (50%)</td>
<td>8 (40%)</td>
<td>7 (100%)</td>
<td>0</td>
<td>7 (100%)</td>
</tr>
<tr>
<td>Reciting the address term of caller e.g. <em>abu</em> ‘father of x’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (5%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>13 (65%)</td>
<td>7 (35%)</td>
<td>20 (100%)</td>
<td>7 (100%)</td>
<td>0</td>
<td>7 (100%)</td>
</tr>
</tbody>
</table>

However, the majority of the beginning of conversations among the participants was answered by greeting (55%) as a summons answer, e.g. *hala or marhaba* ‘welcome,’ followed by *alo* ‘hello’ (40%), and reciting the address term of caller, e.g. *abu* ‘father of x’ (5%). The following conversation is a sample of greeting as a summons answer between two friends.
The callee answered the summons using the greeting *marhaba*. Then the caller followed that summons answer by another greeting *assalamu alaykum* ‘Peace be upon you’ in line 3. This greeting is not a response to *marhaba* in this case. As a result, this greeting, i.e. *assalamu alaykum*, was responded to by the answerer *wa alaykum assalam wa rahmatu allah* ‘Peace and God's mercy be upon you too’ in line 5. This greeting is considered as a main greeting that will be examined in the coming section, which is about greeting exchanges, for more details. In another conversation, a callee answers the call by using another form of greeting, e.g. *hala* ‘welcome.’ This greeting is similar to *marhaba* in the meaning ‘welcome,’ but it differs in the form, as shown in line 3 in conversation 9.

Sometimes the name of caller or his/her address term is added to the greeting. In the following sample of conversation, the callee answered the call using the greeting *hala*, followed by the address term of the caller *abu Abdulelah* ‘father of Abdulelah’ in line 2. Also, it is an example of the impact of caller ID in which the callee could identify the caller before opening the line.
Although the majority of participants used the greeting *hala/marhaba* as a summons answer (55%), followed by *hello* (40%), and reciting the address term of the caller (5%). It was found that there was a major difference between male and female participants in the frequency of using that greeting, as shown in Table 1. Male participants used the greeting *hala/marhaba* as a summons answer more frequently (72%) than female participants (27%).

According to Table 1, *alo* was the second most frequent expression of the summons answer, after the frequency of greeting *hala/marhaba* that was used by the participants (40%). Also, it was used by the researcher as a summons answer in all the six conversations, where the researcher was an answerer/callee. The following sample of conversation shows the use of *alo* as a summons answer (see line 1). It was followed by exchanging greeting in line 2 and 3.

However, the female data recorders did not use any summons answers because they were callers in all the conversations. In other words, they were not answerers in any call. The frequency of data recorders’ expressions will not be discussed because they indicate their repetition in the calls. A new phenomenon was found in some conversations where the caller speaks first. However, it occurred only with the data recorders, which may indicate the personal style when talking on mobile phone (see Extract 6).

In this conversation, the caller spoke first by using *alo* ‘hello.’ The answerer also responded by using *alo* followed by the greeting *marhaba*. Unlike this example, the female data recorders spoke first by using *alo* followed by exchanging greeting immediately in three conversations. The
following conversation is a sample of it, which was between two relatives: one female data recorder and her aunt.

Conversation # 29
01 Caller: Suaad data recorder
   alo assalamu alaykum
   Hello, peace be upon you
02 Callee: Shahad
   hala suaad ↑kayfik
   Welcome suaad, how are you?

The caller spoke first by using *alo* followed by the greeting *assalamu alaykum* ‘Peace be upon you.’ The callee responded that greeting by saying *hala* ‘welcome’ and also started the sequence of *how are you*, for example *kayfik*. The other two samples, where the data recorders spoke first, are similar to the previous sample, i.e. conversation 29. In these exceptional cases of female data recorders, the sequences were reduced to greeting and *how are you* exchanging. Finally, both male and female participants were equal in the frequency of using *alo* as a summons answer (50%).

In contrast, there was only one case (5%) in which the callee answered the call by reciting the address term of the caller, e.g. *abu Abdulelah* ‘father of Abdulelah’ in conversation 3 (see line 1).

Conversation # 3 (it was between two friends)
01 Callee: Basil
   ↑abu abdulelah
   Father of Abdulelah
02 Caller: Mohammad
   [alo]
   Hello
03          (0.3)
04 Caller: M
   alo::
   hello
05 Callee: B
   alo:
   Hello

In his conversation, it is obvious from line 2, 3, 4, and 5 that there was a problem in the connection. Therefore, the callee used the address term of caller probably in order to assure that the caller was on the line.

To sum up, this part displayed three ways of answering the summons. Using greeting like *hala/marhaba* was the most frequent one, followed by *hello* and reciting the address term of the caller. The male participants tended to use greetings as a summons answer more than females. However, they were equal in the use of *hello* to answer the call. The following part is about the next adjacency pair, which is greeting exchanging.

**Greeting Exchanges**

In the previous section, the results showed a type of greeting, e.g. *hala/marhaba* that was used as a summons answer, but it received no greeting response from the caller. However, a caller uses a greeting, e.g. *assalamu alaykum* ‘Peace be upon you’ in the next turn which is the adjacency pair of the greeting exchanges that receives a greeting response.
The results of the adjacency pair of greeting exchanges were divided in two parts. The first part is only about the ritual expressions of greetings, whereas the second part will be about both greeting expressions and their responses. The following table, Table 2, shows the greeting expressions.

Table 2. The Frequency of Greeting Expressions

<table>
<thead>
<tr>
<th>Expressions</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorder</th>
<th>Female data recorders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Assalamu alaykum</em> ‘Peace be upon you’</td>
<td>5 (100%)</td>
<td>0</td>
<td>5 (62%)</td>
<td>13 (76%)</td>
<td>4 (23%)</td>
<td>17 (80%)</td>
</tr>
<tr>
<td><em>Salam/assalam</em> ‘Peace’</td>
<td>0</td>
<td>1 (100%)</td>
<td>1 (12%)</td>
<td>0</td>
<td>4 (100%)</td>
<td>4 (19%)</td>
</tr>
<tr>
<td><em>Assada allah misak</em> ‘(May) God make your evening happy’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (12%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>Marhaba</em> ‘welcome’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (12%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7 (87%)</td>
<td>1 (12%)</td>
<td>8 (100%)</td>
<td>13 (61%)</td>
<td>8 (38%)</td>
<td>21 (100%)</td>
</tr>
</tbody>
</table>

According to Table 2, three forms of greeting were used by the participants when they were callers in seven conversations, e.g. *assalamu alaykum* ‘Peace be upon you,’ *salam/assalam* ‘Peace,’ *assada allah misak* ‘(May) God make your evening happy,’ and *marhaba* ‘welcome.’ In addition, one female callee answered the call by using *hello* and greeting, e.g. *alo salam* ‘hello, peace’ which means that she initiated the greeting exchanging first rather than the caller.

As shown in Table 2, the greeting expression *assalamu alaykum* ‘Peace be upon you’ was used by the participants more frequently (62%) than the other greeting forms, e.g. *salam/assalam* (12%), *assada allah misak* (12%), and *marhaba* (12%). Moreover, the other forms of greeting expressions did not show significant differences in the frequency of use. As a result, they were only used 12%. It means that there was a preference for using *assalamu alaykum* among the male participants. All the female participants, on the other hand, were callees; therefore, they did not initiate any greeting except one female callee that was explained above. It is obvious that the female greetings were only initiated by the two female recorders such as *assalamu alaykum and salam/assalam*. The following sample shows the use of the most frequent greeting expression (see line 4) and the response (see line 5):

Conversation # 1 (between two friends)
01 Callee: Mohammad  
\[\text{alo}\]
Hello
02 Caller Abid  
\[\text{((kid’s voice))}\]
03 callee: M  
\[\text{alo}\]
Hello
04 Caller: A  
\[\text{assala:mu} \text{ alaykum=}\]
Peace be upon you
05 Callee: M  
\[\text{wa alaykum essala::m wa rahmatu alla::h ahlan}\]
\[\text{wa sahlan}\]
Peace and God's mercy be upon you too, welcome, welcome
All the data recorders used the same greeting expressions except *assada allah misak* and *marhaba*, which were used only by male participants. On the other hand, the greeting *salam/assalam* was only used by women, i.e. one female participant and female data recorders. The participants used various greeting responses to the greetings of *assalaamu alaykum* ‘Peace be upon you,’ *salam/assalam* ‘Peace,’ *assada allah misak* ‘(May) God make your evening happy’ and *marhaba* ‘welcome’ (see Table 3). The following table, Table 3, shows both greeting forms and their responses that were used by participants and data recorders.

Table 3. *The Greetings and Frequency of Responses*

<table>
<thead>
<tr>
<th>Greeting forms</th>
<th>The responses of greeting</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorder</th>
<th>Female data recorder</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Assalaam u alaykum</em> ‘Peace be upon you’</td>
<td><em>Wa alaikum assalam</em> ‘Peace be upon you too’</td>
<td>2 (28%)</td>
<td>5 (71%)</td>
<td>7 (35%)</td>
<td>1 (50%)</td>
<td>1 (50%)</td>
<td>2 (25%)</td>
</tr>
<tr>
<td></td>
<td><em>Wa alaykum assalaamu wa rahmatu Allah</em> ‘Peace and God’s mercy be upon you too’</td>
<td>5 (83%)</td>
<td>1 (16%)</td>
<td>6 (30%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>Assalaam</em> ‘Peace’</td>
<td><em>Wa alaykum assalaamu wa rahmatu Allah wa barakatuh</em> ‘Peace and God’s mercy and blessings be upon you too’</td>
<td>4 (100%)</td>
<td>0</td>
<td>4 (20%)</td>
<td>4 (100%)</td>
<td>0</td>
<td>4 (50%)</td>
</tr>
<tr>
<td><em>Salam/assalam</em> ‘Peace’</td>
<td><em>Hala</em> ‘Welcome’</td>
<td>1 (33%)</td>
<td>2 (66%)</td>
<td>3 (15%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>Assada Allah misak</em> ‘(May) God make your evening happy’</td>
<td><em>Wa nassaaka bi kuli khair</em> ‘And may (He) make all your evening good’</td>
<td>0</td>
<td>0</td>
<td>0 (15%)</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (12%)</td>
</tr>
<tr>
<td><em>Marhaba</em> ‘welcome’</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (12%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>12 (60%)</td>
<td>8 (40%)</td>
<td>20 (100%)</td>
<td>7 (87%)</td>
<td>1 (12%)</td>
<td>8 (100%)</td>
</tr>
</tbody>
</table>

According to Table 3, the greeting response *wa alaikum assalam* ‘Peace be upon you too’ was the most frequent response (35%) for the greeting *assalaamu alaykum* ‘Peace be upon you’ or *salam/assalam* ‘Peace,’ followed by *wa alaykum assalaamu wa rahmatu allah* ‘Peace and God’s mercy be upon you too’ (30%). For the same greeting, there were two greeting responses used less frequently by the participants, e.g. *wa alaykum assalaamu wa rahmatu Allah wa barakatuh* ‘Peace and God’s mercy and blessings be upon you too’ (20%), followed by *hala* ‘welcome’ (15%). The other two greetings: *assada Allah misak* and *marhaba* were only responded by the male data recorder. For instance, *assada Allah misak* was responded by *wa nassaaka bi kuli khair* ‘And may (He) make all your evening good,’ and *marhaba* was responded by *hala*.

Moreover, the results indicate some preferences between the two groups: male and female participants in terms of using some greeting responses. First of all, *wa alaikum assalam* was used more frequently (71%) by female participants than male participants (28%). In contrast, male participants used *wa alaykum assalaamu wa rahmatu Allah* more frequently (83%) than female participants.
participants (16%). It is obvious that the male participants tended to use the long form of this
greeting response, which is quite similar to the following greeting in terms of the frequency of use,
e.g. *wa alaykum assalaamu wa rahmatu Allah wa barakatuh* (100%). This long form of greeting
response was not used by anyone from the female participants.

Some participants tended to employ more than one greeting response in the same turn. As
shown in line 3 in the following sample of conversation, the callee responded the greeting by
adding *hala wallah* ‘welcome, (I swear) by God’ to *wa alaykum essalam* ‘Peace be upon you too.’
*Wallah* means ‘I swear by God,’ but it is a discourse marker that was used to intensify the meaning
of *welcome*. The goal of using more than one greeting expression and the discourse marker as an
intensifier is usually to show more intimacy for the addressee (see line 3 in Extract 2).

**Conversation # 2**    (it was between two friends)
01 Callee: Rami  
alo
Hello
02 Caller: Mohammad  
ASSALAMU ALAYKUM
Peace be upon you
03 Callee: R  
*wa £ alaykum assalam £ hala wallah*
Peace be upon you too, welcome, (I
swear) by God

In extract 3, the sample shows the same linguistic behavior by adding more than one greeting
response; however, the form of greeting response that was added to the main greeting differs from
the previous one. The added greeting response was *hayyak Allah* ‘(May) God greet you’ (see line
8).

**Conversation # 3** (it was between two friends)
01 Callee: Basil  
[↑abu abdulelah]
Father of Abdulelah
02 Caller: Mohammad  
[alo]
Hello
03  
(0.3)
04 Caller: M  
alo::
hello
05 Callee: B  
alo:
Hello
06 caller: M  
assalaamu alaykum
Peace be upon you
08 callee: B  
*wa alaykum assalaam wa rahmatu allah*
*hayyak allah ya:: abu abdulelah*
Peace and and God's mercy be upon you
too, May God greet you, father of
Abdulelah

The researcher observed that after finishing the first adjacency pair of greeting exchanges, it
was found that the researcher tended to employ another greeting in the next turn, where he was a
caller in 10 conversations. This greeting, for instance, was *masaa alkhair* (singular)/ *masa
alkhairat* (plural) ‘Good evening’ and *massak Allah bilkhair* ‘(May) God make your evening
good.’ It may indicate the researcher’s personal style that still reflects his experience as a member of the Saudi society.

Surprisingly, one of the callers from the male participants used the same way of greeting in a call when the researcher was an answerer. He employed two greetings in two different turns as shown in the following sample in line 2 and 4.

Conversation # 13   (it was between two friends)
01 Callee: Mohammad alo
   Hello
02 Caller: Amri
   assalaamu alaykum
   Peace be upon you
03 Callee: M
   wa alaykum assalaa::m wa rahmatu allaah
   wabarakatuh ahl an wa sahla::m = Peace and God's mercy and blessings be upon you, welcome and welcome.
04 Caller: A
   =massak allah bilkhair ya abu Abdulelah=
   May God make your evening good, father of Abdulelah
05 Callee: M
   =masak allah biritha wal afiah hai allah abu mohammad
   May God bless your evening with contentedness and health; may God greet (you), father of Mohammad

In line 2, the caller used the greeting assalaamu alaykum that was responded to by the callee in line 3. In line 4, again the caller employed another greeting massak Allah bilkhair that was responded to by the callee in line 5. This form of greeting was also received through various responses from the male participants. Table 4 shows the responses of good evening.

Table 4. The ‘Good Evening’ Greetings and the Frequency of Responses

<table>
<thead>
<tr>
<th>The responses of ‘good evening’</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorder</th>
<th>Female data recorder</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masaa alkhair/ masa alkhairat</td>
<td>3 (100%)</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>‘good evening/ good evenings’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(formal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massak Allah bikhair ‘(May) you evening be filled with light, contentedness, and health’/ massak Allah birridha walafiah</td>
<td>2 (100%)</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>‘(May) God bless your evening with contentedness and health’/ massak Allah binnoor walafiah</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘(May) God bless your evening with light and health’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masa annoor ‘(May) your evening be filled with light’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Allah yihaiik ‘(May) God greet you’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
According to Table 4, the participants used various greeting responses to the various greeting forms of *good evening* that were initiated by the researcher in 10 conversations. The first greeting *masaa alkhair* ‘good evening’ (singular)/ *masa alkhairat* (plural) are more formal than *massak Allah bilkhair* ‘(May) God make your evening good.’ The participants used various expressions as a greeting response to them. For example, the greeting responses *hala/ hala wmasshala/ ya marhaba ya ahlan* ‘welcome/ welcome, welcome’ were used more frequently (30%) than *masaa alkhairat* (10%) and *masaa almasarrat* ‘happy evenings’ (10%) as a response to the greeting *masaa alkhair/ masa alkhairat*. The following various forms: *hala/ hala wmasshala/ ya marhaba ya ahlan* mean ‘welcome/ welcome, welcome’ in English; however, they differ in the form in general.

For the other greeting form *massak Allah bilkhair*, the participants also used various responses that did not show any significant differences in the frequency of use. Finally, this form of greeting was not used by the female participants. In all the conversations, it was discovered that identification/recognition occurred after exchanging greetings. Therefore, the next part is about identification/recognition.

**Identification/Recognition**

All the conversations showed that the callee could identify the callers by the caller ID when the name appeared on it in the data, except for three examples where the callees identified the caller by voice recognition. The researcher was a callee in these three conversations. The first sample (16) shows an example to the sequence of identification/recognition. This call was an international call between two male relatives:

**Conversation # 16**

01 ((ring))

02 Callee: yaquub alov=
Hello

03 Caller: Mohammad =assalamu alaykum
Peace be upon you

04 (0.2)

05 Callee: Y wahalalalalalmohammad halak
And Welcome Mohammad, how are you?

The callee answered the call by “hello” and then the caller greeted the callee in line 3. After that, there was a two second pause before the callee responded to that greeting. It may indicate that
the number did not appear on the caller ID, so he waited for two seconds to be able to recognize the voice of caller\textsuperscript{3}. In line 5, he interrupted himself and returned the greeting. Based on that self-interruption, the callee was going to respond the greeting by \textit{wa alaykum assalam}, but he shifted to another greeting response which was \textit{hala}. At the same time, he uttered the first name of the caller, which means that the identification was achieved by other recognition, e.g. reciting the caller’s first name.

Similarly, the following sample of conversation (18) was also an international call between two relatives. The callee could not identify the caller from the beginning although he used the greeting expression \textit{hala ‘welcome’} in line 2. When the caller greeted him by saying \textit{assalamu alaykum ‘Peace be upon you’} in line 2, there was a three second pause before he responded that greeting. In line 4, the callee responded the greeting loudly and uttered the first name of the caller at the end of greeting. It is similar to the previous sample in which the identification was achieved by other recognition.

\textbf{Conversation # 18}

| 02 | Callee: Hasan | ((music sound)) | 0.2 | hala welcome |
| 02 | Caller: Mohammad | . | assalamu alaykum | Peace be upon you |
| 03 | | | |
| 04 | Callee: Hasan | \textit{WA ALAIKUM ASSALAM WA RAHMATU ALLAH HALA MOHAMMAD} | | Peace and God's mercy be upon you too, welcome Mohammad |

The last sample of conversation (14) was between two friends in the USA, but in two different states. Although the researcher had sent him a text message informing him about his call and study, the callee did not receive it\textsuperscript{4}. The callee could not identify the caller from the caller ID; however, he recognized the caller by his voice. Therefore, the callee started using various greeting expressions in line 6 confirming the recognition. In this line, also, the expressions were stretched out loudly.

\textbf{Conversation # 14}

| 01 | | ((ring)) |
| 02 | Callee: Fadi | alo | hello |
| 03 | Caller: Mohammad | assalamu alaykum | Peace be upon you |
| 04 | Callee: F | \textit{wa alaykum assalam wa rahmatu allahi wa barakatuh} | |
Peace and God's mercy and blessings be upon you too

05 Caller: M masa alkhai::r ya abu humaid

Good evening, father of Humaid

06 Callee: F masa al massaRRA:::t, YALLAH HAYA::H WMARHABA=

Happy evening, May God greet you, welcome

To sum up, identification was achieved by other recognition, not self-identification. Also, it occurred after the exchange of greetings by using the first name of the caller. Recognition could be achieved without mentioning the name of caller as occurred in conversation 14. Finally, the last main sequence of opening informal mobile phone calls was exchanging how are you. It often transpires after greeting exchanges and identification/ recognition.

How Are You Exchanging

This sequence usually includes one or two sequences and sometimes more based on the goal of call. Various expressions were used for asking about well-being and their responses. It means that caller or callee sometimes tend to employ more than one question in one turn. For this sequence, the researcher analyzed only the first caller’s turn of the well-being question and his/her response to the answerer’s question of well-being. Also, the researcher followed the same way of analysis with the answerer, i.e. the researcher analyzed the first turn of answerer’s response to the caller’s well-being question and the first turn of his/her well-being question. The reason for this is that the goal of this study is to identify the opening sequences, not the how are you sequences. In the first table (Table 5), the results will show only the expressions of well-being questions. In the second table (Table 6), the researcher will show both the expressions of well-being questions and their responses. In this section, the researcher is only using tables with no sample of conversations because the adjacency pairs of how are you extended to more than two and three turns, and even more than that in some calls due to the goal of call that is to say hello.

Table 5. The Frequency of Expressions of Well-being Questions

<table>
<thead>
<tr>
<th>The well-being questions</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorder</th>
<th>Female data recorder</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akhbarak (Singular/masculine)/ akhbark (singular/ feminine)/ akhbarkum (plural)</td>
<td>9 (52%)</td>
<td>8 (47%)</td>
<td>17 (47%)</td>
<td>3 (27%)</td>
<td>8 (72%)</td>
<td>11 (40%)</td>
</tr>
<tr>
<td>‘What are you up to?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Akhbar alahal/ alawlad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘How is it going for your family/kids?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaif alhal/ kaifik (singular and feminine)/ ishloonk (singular)</td>
<td>10 (83%)</td>
<td>2 (16%)</td>
<td>12 (33%)</td>
<td>0</td>
<td>1 (100%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>‘How are you?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ishloon (alahal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘How is your family?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ishloonkum (ma addirasah)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘How are you doing in your study?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bashshirna annak/ bashshirna an alakhab</td>
<td>3 (100%)</td>
<td>0 (8%)</td>
<td>3 (8%)</td>
<td>0 (100%)</td>
<td>0 (37%)</td>
<td>10 (37%)</td>
</tr>
<tr>
<td>‘Any good news (to tell) about you/ Any good news?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaif amoorkum/alamoor</td>
<td>3 (100%)</td>
<td>0 (8%)</td>
<td>3 (8%)</td>
<td>0 (100%)</td>
<td>0 (37%)</td>
<td>4 (14%)</td>
</tr>
<tr>
<td>‘How are things going?’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As shown in Table 5, various expressions were used by the participants asking each other about well-being. However, not all of these forms are interrogative forms like *kaif assihah* ‘how is your health?’, *kaif amoorkum/alamoor* ‘How are things going?’, *ishloonak/kaif alhal* ‘how are you?’, and *aish msawwi* ‘what are you doing?’ Some forms are imperative forms, e.g. *bashshirna annak/bashshirna an alakhbar* which literally mean ‘tell us good news about you’ (English translation: ‘Any good news to tell about you?’ In addition, *akhbarak* or *akhbarkum* (plural) which literally mean ‘your news’ (English translation: ‘what are you up to?’ is used as a question without using intonation or a question particle. It is a result of its frequent use; thus, asking the addressee about his/her news or his/her family’s news was the most frequent expression used by the participants (47%). Sometimes it is used as singular, e.g. *akhbarak* or as plural *akhbarkum*. The other interrogative forms, e.g. *ishloonak/kaif alhal* ‘how are you?’ or even about family were used (33%). That was the most second frequent form, followed by *bashshirna annak/bashshirna an alakhbar* (8%) and *kaif amoorkum/alamoor* (8%). However, the form *bashshirna annak/bashshirna an alakhbar* is imperative. The other expression, e.g. *ish msawwi* ‘what are you doing?’ was only used (2%), and it did not show any significant differences in terms of the frequency. Finally, the male data recorder also used most of the expressions except the form of *kaif/ishloon* ‘how’ and *aish msawwi* ‘what are you doing.’ On the other hand, the female data recorders used only *akhbarik* ‘what are you up to?’ and *kaifik* ‘how are you?’

The frequency of asking about news shows no significant differences between male (52%) and female participants (47%). In contrast, the preference was in using *ishloonak/kaif alahal* ‘how are you?’ form. The male participants used this form (83%) more than the females (16%). It means that male participants preferred asking by using ‘how are you’ (83%) and about the addressee’s news (52%). On the other hand, females preferred asking about news (47%) more than ‘how are you’ (16%). Table 6 shows the results of the responses to these well-being questions (see Appendix B).

Despite the various responses in Table 6, it was noticed that thanking God, e.g. *alhamdulellah*, was the most frequent response used by the participants in almost all the well-being questions or the ways of inquiring. For instance, it was used with the well-being questions, e.g. *How is it going for your family/kids?* (23%), *any good news (to tell) about you/any good news?* (13%), *how are things going?* (10%), and *how is your health* (3%). As shown in the Table, there are various linguistic forms meant ‘thank god,’ e.g. *alhamdulellah, Allah humma laka alhamd, or nahmedallah*, which are usually followed by *wnashshkurah* ‘we thank him (God).’ These forms of thanking God, e.g. *Allah humma laka alhamd* and *nahmedallah wnashshkurah* are used to intensify the meaning of thanking God.

The other responses like *bkhair/tayybeen* ‘fine,’ *tamam* ‘perfect’ were used more frequently; however, the frequency did not show significant differences in the use. Usually, these expressions, i.e. fine and good, followed or preceded by one of the expressions of thanking God. It is obvious...
that almost all the responses were positive, which are usually expected in routine expressions. In addition, there is no strong relation between the way of asking by using the various questions of well-being and their responses, as shown in Table 6. In other words, the responses were often the same, in general, in terms of the meaning, e.g. thanking God, fine, and good.

To sum up, while examining the sequences of informal mobile phone calls, it was found that the caller ID function affected the sequences of opening, where the caller could identify the caller before answering the call. Therefore, the identification/recognition sequence occurred only in three calls when the name of caller did not appear on the callee’s mobile phone screen. In addition, the sequence of identification/recognition occurred after exchanging greetings. It means that the majority of informal mobile phone calls included only three sequences: summons answer, greeting exchanges, and how are you exchanges. Furthermore, although the majority of calls were initiated by using hala/marhaba greeting as a summons answer by participants, the sequence of greeting exchanges still exists.

Discussion
This study aimed to examine and identify the opening sequences and ritual expressions of informal mobile phone calls between Saudi friends and relatives. Another goal was to identify the similarities and differences between mobile phone and landline telephone due to the earlier claims in general on this topic and dearth of studies on Arabic in particular. In this study, caller ID function played an important role in influencing the opening sequences in terms of identification/recognition sequence as Schegloff (2002) wonders that effect. As a result, the majority of opening sequences was reduced to three sequences: a summons answer, greetings exchange, and how are you exchange. The main reason for this was that the answerer could identify the caller before answering the call. Therefore, the four sequences were observed only in three calls when the caller information did not appear on the answerer’s caller ID, e.g. a summons answer, greetings exchange, identification/recognition, and how are you exchange. The identification/recognition sequence occurred after greeting exchanges by other recognition, i.e. the answerer could identify the caller by his voice by uttering his first name. It occurred only in three calls where the researcher was a caller in all of them and expected that his phone number would appear for the callees because they have it. However, for technical problems, his phone number did not appear to them. The researcher may find self-identification in a call if the caller knows that his/her number is not with the answerer or he/she is unknown for the callee (Arminen & Leinonen, 2006). The mobile phone opening sequences show similarities and differences with the earlier studies on Arabic landline calls in general and mobile phone calls in particular.

For instance, the majority of sequences were reduced to three sequences in the mobile phone calls in this study, whereas the dominance of four sequences were observed in Lebanese Arabic as universal structure (Hopper & Doany, 1989) and Egyptian Arabic (Schmidt, 1986) in the landline calls irrespective of the variety of Arabic. In addition, although the four sequences were shown to be rare in this study, they differ in the order with Schmidt’s results, e.g. a summons answer, identification, greeting, and introduction of message. Obviously, the identification was achieved after the summons answer sequence; nevertheless, it was found after greeting exchanging in mobile phone call. Another important difference was that the summons answer was frequently used by alo ‘hello’ in Arabic landline calls (Hopper and Doany, 1989). In contrast, some greetings,
e.g. marhaba/hala ‘welcome’ were used as a summons answer which occurred more frequently (55%) than alo (40%) in the calls of mobile phone. This result is supported by the participants because they were answerers in most of the calls. It means that the greeting has two functions at the same time in the first sequence of opening: greeting and a summons answer. However, alo works only as a summons answer in Arabic, which differs from hello in English as it has various functions, e.g. a summons answer, greeting, etc. (Schegloff, 1968). The researcher considered marhaba/ hala as a summons answer by greeting in the analysis because the summons answer was followed by the sequence of greeting exchanges, e.g. assalamu alaykum and the response wa alaykum assalam. The initiation of greeting and how-are-you sequence were initiated mostly by the two female assistants and the researcher as callers, so this may weaken the significance of this result. Despite the differences between Arabic studies in landline and the current study due to the caller ID, the sequences still fall in Schegloff’s structure irrespective of the existence of all or some of the four sequences or the orders. This brief comparison is related to Arabic studies on landline, which was justified by the influence of caller ID. This result, i.e. the caller ID effect, agrees with some results of the previous mobile phone studies.

For instance, Hutchby and Barnett (2005) found that there is an impact of caller ID; thus, the answerer recited the name of caller in most cases in their data instead of using hello as a summons answer. This result showed the effect of caller ID. However, this way of answering the call was only in one case in the results of the current study, which was a result of mobile phone network problem. In addition, the phenomenon of callers speaking first was observed only in a number of cases with data recorders in the data. This phenomenon was explained by Hutchby and Barnett (2005) as a result of the influence of using mobile phone because they found the phenomenon in most of the cases in the data. However, it is difficult to generalize that result due to the feature of using mobile phone because it was also observed in a large number of calls between intimate friends in a landline study in Mandarin in Taiwan (Hopper & Chen, 1996). It can be explained by culture if there is no technical problem in the network or a delay from the answerer to speak first after opening the line (Schegloff, 1968).

The results of reduced sequences support Arminen and Leinonen’s study (2006) because they found out that the sequences were reduced to greeting and topic initiation in mobile phone calls in Finish irrespective of the number of sequences. Although that result is similar to the result of current study in terms of the beginning with greeting, the difference of greeting was in function. In other words, the Finish mobile calls begin with exchanging greetings, but the Saudi mobile calls are often initiated with greeting as a summons answer, not for exchanging the greeting. In the same way of reducing the sequences and beginning with greeting, Laursen and Szymanski’s results (2013) are similar to the current results in terms of reducing the sequences in general, e.g. greetings, how are you, and where are you. However, the difference is that the beginning with greeting, which is similar to Arminen and Leinonen’s study, is in the last sequence (where are you), which is related to future meeting between caller and callee. Although the general similarities that were found in the sequences between the previous studies on mobile phone calls and the current study, there is one study that the present results contrast with it in terms of the absent impact of the caller ID on identification. Weilenmann (2003) reported that callers begin with self-identification and there was no case about reciting the name of caller due to the caller ID in Swedish, which is similar to Swedish landline identification (Lindstro¨m, 1994). Probably, it is a
matter of culture in Swedish. Generally speaking, the previous and current results show similarities and differences in the sequences of opening mobile phone calls and landline calls except the sequence of where are you? due to its mobility.

The opening sequences showed various ritual expressions; however, most of them are religious expressions such as assalamu alaykum and wa alaykum assalam (in greeting exchanges) and thanking God as a response for most of the well-being questions. The previous routines were the most frequent religious expressions used by the participants as a result of the Islamic principles derived from the Holy Quran in Saudi Society. The participants used various forms of inquiry, which are similar to Chinese (Sun, 2004) in terms of varieties of forms, in the how are you sequence such as khbarak ‘what are you up to?’ kafif/ishloon alahal ‘how are you/how is your family,’ bashshirna annak ‘any good news (to tell) about you?’ that have different literal meanings. However, they mean how are you irrespective of the literal meaning; thus, the responses of these inquiries were generally similar, e.g. thank God, fine, or good. It is obvious that there is no relation between the form of inquiry and the way of response to it. Sometimes the well-being questions are used repetitively to show more intimacy and interest in the caller and his/her family (Coronel-Molina, 1998; Taleghani-Nikazm, 2002; Saadah, 2009). Some expressions were used in plural although the addressee, i.e. caller or callee was singular, e.g. akharkum ‘what are you up to? (plural),’ ishloonkum ‘how are you (plural),’ kafif amoorkum ‘how are they going?’. They are used in plural to show more interest in the caller or callee. In contrast, they are used in formal calls in Persian (Taleghani-Nikazm, 2002). Finally, gender variable showed some similarities and differences in the ritual expressions and frequency which can be interpreted as a result of the different regional and educational background between the males and females.

Conclusion
This study examined the conversations of informal mobile phone calls in terms of the opening sequences and ritual expressions. It was found that the caller ID affected the sequences by reducing them to three sequences: the summons answer, greeting exchange, and how are you exchange. They were used more frequently without the identification/recognition sequence that appeared only in three cases by other recognition, e.g. first name. The main difference between mobile phone and telephone is the absence of the identification/recognition sequence that occurs when the number is silent or caller is unknown. Most of the ritual expressions in the sequences were religious expressions that could constitute a major difference across cultures. Males and females used various expressions that showed similarities and differences in the use of expression and frequency. This study faced some limitations and had some suggestions for further research. One limitation is the narrow scope of the data used, the limited number of participants, and the repetition of recorders, i.e. the two female assistants and the researcher in this study. In addition, Saudi women cannot be recorded easily by strange male researchers due to some high privacy in the society; however, female researchers have a strong chance to record them to investigate more ritual expressions based on the factor of gender differences in depth. Therefore, the researcher recorded only his relatives. The researcher also suggests that further researchers should enlarge the number of participants and record naturalistic data. Moreover, further studies should examine Saudi landline calls with and without caller ID to identify and understand more the opening sequences.
Acknowledgments
This project was supported by the Deanship of Scientific Research at Prince Sattam Bin Abdulaziz University under the research project number # 2018/02/9379. So, I express my gratitude to the university for this support. Also, I would like to thank Dr. Hamada Hassanein for revising the translation given in the paper and the assistants who helped in collecting the data.

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Footnotes
1 The researcher relied on Ferguson for that reference because it was written in French.
2 The number of extract indicates its sequence in the data, but not its sequence in the paper.
3 In some international calls, the researcher found that some relatives ask him whether he changed his American phone number because it appeared to them differently, i.e. with a Saudi/domestic phone number.
4 In this call, the callee, the researcher’s friend, told him that he lost his phone number.

References


Appendix A
The Transcription Conventions
::: The more colons the longer the sound is drawn out
(0.1) Timed pause
( ) Untimed micropause
[ ] Overlapping talk
( ) Unclear fragment/best guess
[ ] Point of overlap onset
= Latching utterances
↑ Marked rising intonation
↓ Marked falling intonation
- Sharp cut-off of a word or false start

Appendix B
Table 6. The Well-being Questions and the Frequency of Well-being Responses
### The well-being questions

<table>
<thead>
<tr>
<th>The responses to the well-being questions</th>
<th>Male participants</th>
<th>Female participants</th>
<th>Total</th>
<th>Male data recorders</th>
<th>Female data recorders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alhamdulie (Allah humma laka alhamd)‘Thank God/ God, praise be to you’</td>
<td>1 (14%)</td>
<td>6 (85%)</td>
<td>7 (23%)</td>
<td>1 (20%)</td>
<td>4 (80%)</td>
<td>5 (20%)</td>
</tr>
<tr>
<td>Tamam (allah humma laka alhamd)‘Perfect, thank God’</td>
<td>1 (33%)</td>
<td>2 (66%)</td>
<td>3 (10%)</td>
<td>0</td>
<td>1 (100%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Tayybeen/ bhkair (alhamdulie)‘Good/fine’</td>
<td>2 (100%)</td>
<td>0</td>
<td>2 (6%)</td>
<td>2 (40%)</td>
<td>3 (60%)</td>
<td>5 (20%)</td>
</tr>
<tr>
<td>Bnhm (alhamdulie)‘Blessed and healthy’</td>
<td>2 (100%)</td>
<td>0</td>
<td>2 (6%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alhamdulie ylha (wnshbkruh)/ ya rbb l lhamd ‘Thank God/ we thank (and praise) God/ thank you, my Lord’</td>
<td>4 (100%)</td>
<td>0</td>
<td>4 (13%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bkh (nhzh)‘Fine’</td>
<td>2 (100%)</td>
<td>0</td>
<td>3 (10%)</td>
<td>2 (100%)</td>
<td>0</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>tamam (alhamdulie)‘Perfect, thank God’</td>
<td>2 (100%)</td>
<td>0</td>
<td>2 (6%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alhamdulie ‘Thank God’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (3%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mashh ‘so so’</td>
<td>3 (100%)</td>
<td>0</td>
<td>3 (10%)</td>
<td>1</td>
<td>0</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Bkh ‘Fine’</td>
<td>1 (100%)</td>
<td>0</td>
<td>1 (3%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tamam (alhamdulie)‘Perfect, thank God’</td>
<td>0</td>
<td>2 (100%)</td>
<td>2 (6%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alhamdulie ‘Thank God’</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 (100%)</td>
<td>2 (8%)</td>
<td>2 (8%)</td>
</tr>
</tbody>
</table>

---

**Notes:**

- **Akhbarak** (Singular/masculine)/akhbarik (singular/ feminine)/akhbar (plural)
- *‘What are you up to?’*
- Akhbar alahal/ alawlad
- *‘How is it going for your family/kids?’*

- **Bashshirna annak/ bashshirna an alakhbar**
- *‘Any good news (to tell) about you/ Any good news?’*

- **Akhbar alahal/ alawlad**
- *‘How are you doing in your study?’*

- **Ishloon** (alahal)
- *‘How are you?’*

- **Kaif assihah**
- *‘how is your health’*

- **Kaif amoorkum/alamoor**
- *‘How are things going?’*
<table>
<thead>
<tr>
<th>Arabic Expression</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘(May) God greet you’</td>
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<td>0</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>Bkhair ‘Fine’</td>
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<td>0</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Allah humma laka alhamd ‘God, praise (be to) you’</td>
<td>0</td>
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<td>1 (100%)</td>
</tr>
<tr>
<td>Aish msawwi (masculine) ‘What are you doing?’</td>
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<td>10 (33%)</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>15 (60%)</td>
<td>10 (40%)</td>
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Graduate Students' Reflections on Technology in Language Learning and Teaching: A Qualitative Study

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Abstract  
This study aims to analyze the experiences and perceptions of a group of graduate students regarding an MA Technology in Language Learning and Teaching Course at Hebron University, Palestine. Specifically, the study addressed the aspects of the course that were perceived as the most useful for them and how graduate students perceive their professional growth as a result of the course. The study took place during the second semester of the academic year 2016/2017. The researcher employed a qualitative research to achieve the aims of the study. The participants wrote reflective journals and described how the course integrated theory and practice. The results revealed that the students benefited from the different elements of the course. Particularly, they benefited from the practical projects. The experience helped them in their professional development. Finally, the students offered a number of suggestions for improving the course. The researcher concluded with a set of recommendations.

Key words: language learning, presentations, practical projects, reflection, technology

Cite as: Farrah, M.. (2019). Graduate Students' Reflections on Technology in Language Learning and Teaching: A Qualitative Study. Arab World English Journal (AWEJ) Special Issue on CALL (5). 252 -266. DOI: https://dx.doi.org/10.24093/aewej/call5.17
Introduction
Learners can use reflections to describe certain learning experiences and how they contribute to their professional growth. Bright (1996) believes that reflective practice is one of the active processes that is considered important and relevant to the understanding of ongoing action where learners are offered with opportunities to improve their learning practices. Similarly, Hennessy (2014) contends that the reflective process helps learners learn from their experiences and relate their insights to theoretical perspectives in order to synthesize from experience.

Reflection is considered an active process intended to achieve better understanding and development; thus, it is likely to bring about professional growth. Schön (1983) categorizes the reflective practices into two main parts: (1) reflection on action, where learners or teachers appraise past experiences; and reflection-in-action, where learners or teachers reflect during the time of teaching. Similarly, for his process-oriented approach, Dörnyei (2001) identifies three distinctive phases for motivation which include the following: (1) the pre-actional phase, (2) the actional phase, and (3) the post-actional stage. The pre-actional phase refers to defining clearly stated goals and tasks to be pursued in the second language (L2). The actional phase refers to accomplishing tasks. In the post-actional stage, learners reflect on their learning experiences and future goals. Accordingly, learners are likely to experience the processes of stating goals, reflecting on their learning experiences, and selecting effective strategies to pursue in the future to develop their learning outcomes.

According to Bright (1996), reflective practice is a dynamic process which is significant and appropriate to learning. When learners are involved in reflective practices, they can shape their learning, advance their practices, and ensure the accomplishment of more effective outcomes.

Reflection allows learners to respond, recognize, observe, evaluate, and review the learning process. Therefore, Richards and Lockhart (1994) believe that individual educators can have vital contributions to the learning process by presenting their views with respect to what creates successful learning. In a similar vein, Mezirow (2000) believes that learning takes place when the individuals assume their responsibility over learning by critical thinking and reflection that lead to plans that achieve better learning outcomes. Accordingly, the reflective practice will lead to what is considered a disposition to enquiry (Ghaye & Ghaye, 1998).

Literature Review
Several studies revealed that technological applications create a principally conducive atmosphere for a number of 21st century skills such as collaboration, communication, critical thinking, creativity and innovations, and self-direction (Balanskat et.al. 2006). In fact, the greater use of technology demonstrates that 21st century people are exposed to and practice much more critical thinking skills than they did a century ago. Technological tools provide students with many opportunities such as retrieving, interpreting, and generating novel ideas. Consequently, students may develop important skills such as critical thinking, creativity and innovation, collaboration and communication, and self-direction. Koehler and Mishra (2008) argue that creative incorporation of technology necessitates that educators should remain “continually creating, maintaining, and re-establishing a dynamic equilibrium between each component (p. 20)” Effective access and creative use of information form the foundation for lifelong learning (Andretta, 2005). Watson et
al. (2008) contend that technological tools will change all the methods of educational forms in the 21st century. McFarlane (2001) observes that information and communication technologies (ICTs) have the potential to favorably influence a variety of effective learners' traits such as solving problems, thinking critically, and managing information.

In a qualitative case study, Burhan-Horasanli and Ortaçtepe (2016) examined in-service EFL teachers’ reflective practices in a graduate course. Based on their analysis of individual interviews and reflective discussions, they concluded that EFL teachers can gain advantages from reflective practices when they assess their teaching practices.

Bobrakov (2014) conducted a study to examine teachers’ perceptions of incorporating practice and theories in action research. According to him, action research aids learners to use theories for reflection on practical activities. In his study, the participants remarked the significance of research skills for evaluation and reflection of practical activities.

Accordingly, the present study aims to reveal students’ experiences in a Language Learning and Teaching course that were perceived in their reflective journals. In order to achieve the objectives of the study, the following questions were posed to explore the learners' experiences:

**Research Questions:**

1. Which aspects of the MA Technology in Language Learning and Teaching course were perceived as the most useful for them?
2. How do MA students perceive their professional growth as a result of the Technology in Language Learning and Teaching course?
3. What suggestions do MA students have for improving the Technology in Language Learning and Teaching course?
4. What adjectives do the MA students use to express their feelings about developing a digital book and other applications in the Technology in Language Learning and Teaching course?

**Methodology:**

This present study aimed to identify and present the reflections of graduate students in a Technology in Language Learning and Teaching Course. The MA in Applied Linguistics and Methods of Teaching English program which is conducted by the Department of English, Hebron University, offers Technology in Language Learning and Teaching course.

A qualitative research design was used in this study. This design allows the participants to reflect their point of views and experiences during the course understudy. According to Braun and Clarke (2006) the qualitative research design is rich, stimulating, and thought-provoking in a number of ways. According to Janesick (1999), reflective journals are one way of gathering data in qualitative research.
Technology in Language Learning and Teaching course offered in the second semester of the academic year 2016-2017. The age of the students ranged from 23 to 35 years, and ten of them were females and four were males.

Data Collection Procedures:
To understand the experiences of the graduate students in the Technology in Language Learning and Teaching course, the researcher collected data through reflective journals. One of the required assignments was the submission of reflective journals by the end the Technology in Language Learning and Teaching course. The students were asked to describe their experiences during the Technology in Language Learning and Teaching course. The students were guided by a number of questions to help them reflect on their experiences (Appendix A).

Procedure
As the thematic analysis is generally used in qualitative research, the researcher analyzed his data of the reflective journals through building emerging themes. Consequently, the researcher categorized the themes into groups that fit together and fulfill his aims for examining the participants' experiences. After in-depth reading of the reflective journals, the researcher reconnoitered their content following several steps.

1. The reflective journals were categorized into four parts.
2. Every part answered one specific question of the four research questions of the study.
3. The researcher identified, categorized and organized the central emerging themes in each part of the reflective journal. Parallel themes are placed together.
4. Finally, the data were interpreted. Discussion, inferences and conclusions were drawn.

Findings
The researcher read, reread, identified, categorized, and compared participants’ responses and found main areas that helped in answering the four questions of the study:

1. Which aspects of The MA technology in language learning course were perceived as the most useful for them?
The respondents expressed their deep satisfaction with the course and this is evident in their response to this question where they a number of key ideas/themes/concepts were developed and identified in the reflective journals. They expressed many valuable aspects of the course. Most of the students identified key aspects such as practical projects (web page construction, electronic books, and research paper), websites evaluation topics/materials and presentations, discussion and online responses. These were the most frequent themes that emerged in response to the first question.

a. Practical projects (web page construction, electronic books, research papers)
Another aspect of the course that the fourteen participants perceived to be useful is the practical projects. This included constructing web pages and designing electronic books and writing research papers. It is clear that most participants had very high degree of agreement about the usefulness of this task. They reflected on the practical projects as they helped them to be equipped with the necessary technological knowledge that they need in their classrooms. The aspects of the
practical project (web page construction, electronic books, writing a research paper) gained their significant role for the teachers exposing to practical experiences while constructing their webpages, designing their electronic books and writing their research papers. Such projects were very useful to them for several reasons such as:

- Teaching them a lot of technical as well as artistic designing techniques never known before and made acquainted them with the technological tools that they need to use in their classes.
- Acquiring the skills of designing and producing some educational websites and materials.
- Helping them to build certain projects that are suitable for their classrooms.

Due to these reasons, they perceived it to be valuable for teaching and learning. Moreover, the participants who chose to write a paper instead of a practical project found the paper to be very useful. They perceived it to be useful as it helped to gain both theoretical knowledge and practical training on writing research papers. This indicates that writing a research paper is seen as a very helpful tool in the classroom as it contributed to developing their research writing skills.

In short, the above-mentioned findings reveal that all participants highlighted the usefulness of the practical projects that included designing and constructing web pages or electronic books and writing research papers. So, the participants talked about putting the theoretical part into practice and accomplishing real practical projects.

### b. Websites evaluation

Another aspect of the course that 12 out of the 14 participants perceived to be useful is website evaluation. Regarding the website evaluation, there was a high degree of agreement about the effectiveness of this task. They reflected on the websites they evaluated.

Website evaluation is perceived to be the second most useful aspect of the course. According to the participants, it has several benefits:

- Finding a lot of new and useful websites that they can implement and use as great supplementary resources for their students and that help them in their MA program. The websites that they were exposed to through the course were very beneficial and really expanded their knowledge in this field.
- Knowing many educational websites and distinguishing authentic websites from unauthentic websites.
- Offering them enough experience to design and create a learning website.
- Enabling them to provide their students with authentic resources that can help them develop their language and other life skills.

This means that the participants became aware of the importance of certain websites as the task helped them to be exposed to new websites designed for helping them as teachers with a lot of engaging and appealing activities.

### c. Topics and presentations

There was a consensus and harmony among the participants that the topics and presentations were among the most prominent aspects in the course. Twelve participants out of fourteen listed the topics and presentations as one of the most useful aspects of the course. Twelve participants mentioned the covered topics and their own presentations, as well as the presentations delivered by their classmates, were useful. They found the topics and the presentations useful as
they offered them with great benefits. They described the course content and the presentations as a valuable and interesting and the materials that were covered up-to-date, rich, clear, comprehensive, authentic, and relevant. They added that topics are useful and meaningful in this course. This contributed to making the lectures student-centered where each student has to do two power point presentations. The topics were interesting and authentic. They were comprehensive and covered all their needs. Moreover, during the course, they enjoyed learning about the different teaching theories, approaches and methodologies that were proposed by the other colleagues’ presentations. While answering students' questions and responding to the presentation, they developed their critical and creative thinking skills, language skills, and the 21st-century skills.

Within reflecting on the usefulness of the presentations, the students reflected on a number of beneficial aspects and some of them reflected on what happened in the stage of preparing for the presentation, during the presentation and after the presentation. The presented topics combined theoretical knowledge and the practical experience that allowed them to employ all the information about computer assisted language learning (CALL). Moreover, they indicated that topics and presentations were among the most appropriate resources for teaching as expressed by them. In short, the presented material and the presentations exposed student to a variety of theoretical as well as practical knowledge in the field of technology in language learning and teaching and resources, and the greatest notable thing is putting the theoretical part into practice.

d. Class discussion and online responses

Other aspects of the course that many participants perceived to be useful were the classroom discussion and online responses. There was a high degree of agreement about the effectiveness of this task.

Class discussion and online responses were perceived to be among the useful aspect in the course. According to the participants, the class discussion and online responses were extremely valuable as they encouraged them to read a lot and critically respond to different interesting topics. The participants reported sharing experiences and information effectively. One student elaborated by saying, "I also benefited from the discussions that occurred with my professor and colleagues and I think it will help me improve my teaching style." Another student added, "I also can't miss the important role that the responses had on my way of looking at things differently, when I wrote responses, it wasn't just about answering a certain question, but it was also about critical thinking and effective methods in learning." Other students opined that they benefited a lot from the discussion inside the class and the online responses about several useful web applications such as, blogs and wikis, software programs such as grammar checker and asynchronous and synchronous computer-mediated techniques.

In short, the findings indicate that the discussions among the participants inside the class, the online responses to other students' presentations and questions were very useful and beneficial as it offered them with the opportunity to express opinions, ideas and thoughts.
2. How do graduate students perceive their professional growth as a result of the Technology in Language Learning and Teaching course?

A number of key ideas/themes/concepts were developed and identified by the students in their reflections upon their experience in the Technology in Language Learning and Teaching course. The participants revealed many good aspects of their profession. The following aspects emerged: Effective preparation and use of power-point presentations, practical projects and employing technological devices, class management strategies (changing roles, saving time, learning centered activities), and expanding knowledge and critical thinking skills. The researcher will present them one by one starting with those that were mentioned repeatedly:

a. Effective preparation and use of powerpoint presentations

There was a consensus and harmony among the participants that the course equipped them with tools to prepare effective power point presentations reveals. The participants emphasized the usefulness of their own presentations as well as the presentations delivered by their classmates. Within reflecting on the usefulness of the presentations, the students reflected on a number of beneficial aspects and some of them reflected on how effective preparation and use of powerpoint program makes it easier and more interesting for them. Thus, this aspect contributed to their development on the professional level. This is evidenced by their statements that showed they have grown professionally as a result of the power point presentations in the course:

- They became competent in using power point presentations and other technological devices and well-prepared to apply what they learned to develop themselves and their students.
- Using the powerpoint program made it easier and more interesting for their students.
- They became more familiar and knowledgeable about the effective use of power-point presentations in learning and teaching inside the EFL classroom.
- Using technology in the process of teaching facilitates the pedagogical process.
- They became aware of the potential applications that can be used in their classrooms.
- Preparing and delivering powerpoint presentations shaped their professional identity and helped them stand and talk in front of the public.
- Creating digital books adding videos, audios, texts, powerpoint presentations, photos, and extra links for more information helped the teacher and the learner move the process of teaching toward student-centered method.
- Answering students' questions and responding to their presentation has developed their critical and creative thinking and expanded their four language skills and the 21st-century skills.

In short, the participants favored the presentations as they helped them to shape their identities as teachers and equipped them with creative teaching methods that they acquired from the various readings as well from their colleagues during the discussions that took place in the class.

b. Practical projects and employing technological devices

Another factor that appeared frequently as a major contributor to their professional growth is the practical projects and employing technological devices. It is mentioned by 11 students.
When the participants emphasized that practical projects contributed to their professional growth. It added to their experience, productivity, creativity, knowledge, personality, confidence, and qualifications as expressed by one of the students:
"What I knew about technology is just using computers and search on the internet. I didn't know how to employ mobile phones as a tool to learn and teach English. I have found that it is very useful since mobile phones are available with every student."
Another student added, "the idea of planning a learning website will make a significant change in the teaching-learning project which makes English lessons more appealing for students."
This means that the course provided them with the following benefits:

- Gaining a variety of teaching skills that will be helpful in their future career.
- In addition, all the projects were excellent in developing the students’ abilities to study. Accordingly, they will use their projects and borrow from their colleagues work to encourage their students to study.
- They felt feel more prepared to continue in the rest of this wonderful learning experience of the Master’s Program in Applied Linguistics.
- The use of technology throughout the semester changed their perspective towards using technology in the classroom. They became ready to include technology in teaching language because it makes the language learning experience more productive.
- They felt that the websites evaluation assignment was very effective because they developed their searching and critical skills and acquired the basic criteria to evaluate CALL resources.
- The project helped them promote autonomous learning, learner-centeredness, and problem-solving skills.
- Facing some challenges while preparing the projects and solving the problems made them grow technologically and professionally.
- This course gave them novel ideas about using technology inside classrooms and the theory behind that.

One student elaborated on how the practical experience benefited them: "my practical experience in designing web pages with my classmate, Samaa’, was enjoyable and of great value. Internet-literacy we invested granted me further skills that I can use in the world of the public relation when presenting educational achievements and strategies. Utilizing I-spring application added to my presentation skills that I usually use to attract the attention of public community and prepare the audience to approve changes adopted by the Ministry of Education. Our practical experience of designing the webpage “Teachers for Change” and the virtual interactive class was full of challenges. It was difficult for us at the beginnings to establish new work. However, we persist on constructing new work of inter-disciplinary goals depending on our little experience and classroom discussions. It was difficult for us to include English language teaching material of 21st century due to its relation to further issues of technology. A supervisor for technology subjects helped us to select appropriate software after we recognized the use of each and finally we could successfully decide the functions of each based on file extensions. Things have gradually become clearer and exciting after we become familiar with functions of technical file extensions. We got interested in creating sketches and games for Fourth Graders via I-spring application. It was a very fruitful
experience that really could improve our critical thinking, creativity, collaboration and communication to elaborate content for Fourth Graders. We always kept thinking what attract learners attention and engage them into better learning context."

Other students summarized why practical projects were perceived by them to contribute to their professional growth:
"As a result of this course, I am now much more productive, and I have learned a range of new technological skills, including Microsoft powerpoint and how to do Android application for smartphones."
"Developing digital books, android applications and educational websites helped me as a student in this course to grow professionally."

"When I used this application with my students, the results were amazing and surprising. Weak and shy students who never participated got motivated and participated in using the application. As a result of using this application with my students, most of the students recognized the new unit's vocabulary not like the previous units. In the end, this course (Technology in Language Learning and Teaching) is very beneficial and useful in my carrier as a teacher."

In short, most participants listed the practical projects as factors that contributed to their professional growth. The practical projects contributed to shaping the students identity and teaching profession. They learned novel methods based on practical and empirical research that and this helped them improve their teaching styles and practices. As a result, they described it as a valuable teaching project that resulted in great works. The practical projects equipped them with practical methods and strategies, and most importantly putting the theoretical part into practice and thus contributed to their professional growth.

c. **Class management strategies (changing roles, saving time, learning centered activities)**

Another factor that appeared frequently as a major contributor to their professional growth was class management strategies. A second aspect of the course that perceived to promote professional growth is class management strategies. Most participants highlighted the role of class management strategies in prompting their professional growth.

The participants highlighted how the course helped them in class management. It helped them in saving time, changing roles as well as using interactive experiences and promoting collaboration among their students:

- They have the ability to create their own educational material in a short time and low cost.
- They have been stimulated to develop their students' communicative skills and critical thinking by using technology.
- Their vision of using technology in language learning field has become broader.
- This kind of collaboration has developed my sense of active collaboration.
- The first goal is to support my students' collaboration and provide them with interactive experiences. The second one is to transform my teaching processes from being teacher-dominated to student-centered. The third goal is to focus on developing my students'
critical thinking. The fourth one is to provide my students with the 21st-century skills where student practice and develop their four skills significantly. The fifth goal is to take the individual differences and students' needs and interests into consideration. The seventh one is to make the learning process a continuous one that does not stop at the limits of the curriculum and the limits of school hours. Finally, to use all technological devices even the very simple one.

- Using the powerpoint program makes it easier and more interesting for students.
- Integrating technology will save time.
- Using technology makes learning fun and valuable.
- Moreover, using technology enhances motivation, collaboration and interactivity in all students especially those with low abilities and motivation.

This means that the participants believe that the course contributed to their professional growth as they started using better class management strategies by developing interesting activities and managing classes effectively.

d. Expanding knowledge and critical thinking skills
Developing critical thinking appeared to be one of the major factors that added to their professional growth and expanded their knowledge. Most participants emphasized the role of the course in stimulating their professional growth in terms the major benefits were revealed by the participants are:

- The course expanded their knowledge about the possibilities of technology in the EFL classroom. They became prepared to use a lot of technological resources inside their classes.
- The course contributed to broadening their understanding of the potential of CALL in their classes. Now, they are using technology almost in their classes.
- They are motivating their students, saving time and moving toward a student centered class.
- They empowered their knowledge with critical thinking and judging the work of others.
- They became capable of producing more and performing much better as a result of this course. After discussing many CALL resources during this course, they felt that they became well prepared to apply what they learned to develop themselves and their students.
- It made them expert in using online collaborative writing and other skills to use in their future career.
- It prepared them well for the challenges that they might face during work.
- They become knowledgeable about the importance of technology in language learning and teaching. Thus, as teachers, they decided to transfer their repertoire of this course to their colleagues as well as their students. For instance, said that they are going to expose their students to tools used to teach and learn using technology and they are going to show their students the websites done by other colleagues in order to change their attitudes, attract their attention and make them eager toward learning through technology.
- They felt that the course improved their professional capabilities in the sense that it made me experiences what it would be like to step into the shoes of a teacher and teach students through the use of computer programs.
• The course developed their experiences as MA students as this course developed their ability to explore the web looking for authentic materials for their students and using technology and appealing up-to-date activities
• They gained some confidence to use and technology in the classes.
• The course enabled them to diagnose the teaching and learning context after integrating technological devices as initiative reforms to reinforce modern teaching methods in the 21st-century.

3. What suggestions do MA students have for improving the Technology in Language Learning and Teaching course?

The participants offered a number of suggestions to improve the Technology in Language Learning and Teaching course. These suggestions are pertinent to the number of assignments, more practical projects and technical training workshops, prepare better labs. The suggestions are:

a. Reducing the number of assignments and increasing the practical activities

Regarding the number of assignments, the students have a number of suggestions. Some participants suggested reducing the number of assignments as they did not have sufficient time and faced challenges in preparing two presentations. They elaborated that focusing on a certain task will help each of them to explore the great value and benefit a lot. They added that they need more practical activities and watching more educational videos.

b. More practical projects and technical training workshops

Offering more practical projects and technical training workshops is one of the suggestions that most of the participants called for. The suggestions regarding this aspect can be summarized in the following points:
1- Creating websites instead of carrying out theoretical research papers
2- More practice
3- Conducting training workshops on how to make a teaching website or electronic book
4- Having field trips to local schools to see what elements of CALL are available and what elements are not.

c. Preparing better labs

Regarding the labs, the students have a number of suggestions. The suggestions revolved around preparing better labs to be better equipped with the technological devices and internet resources (constant availability of internet connection).

4. What are adjectives that the MA students used to express their feelings about developing a digital book and other applications in the Technology in Language Learning and Teaching course?

The participants expressed their feelings about the course by mentioning more than 152 adjectives (Appendix B). There are adjectives like interesting and enjoyable which are mentioned by more than eight participants. Other adjectives like novel, authentic, creative and amazing are mentioned more than four times. Finally, a number of adjectives are mentioned more than three times like motivating, comfortable, challenging, cooperative and innovative.

Some students chose to describe the course in a form of a paragraph. One of the participants wrote:
The idea of developing a digital book or making educational websites is very much beneficial. I was very interested and amused by my colleagues’ projects. I found that they were careful and brilliant in their choices of the materials concluded in the electronic books or the educational websites. Electronic books are attractive, courageous, wonderful, and easy to use. It is also helpful for students as it provides them with information in a funny and enjoyable way. Creating websites to treat certain weaknesses in students’ achievement in the class is another great idea to help our students to become a better learner. For example, my colleague Nasser created a wonderful website. The website he created is colorful and full of training materials worksheets, educational games, and song. In my opinion, this course prepared us to become bright teachers who use modern ways of solving our students learning problems. I was really very much interested in this course and I gained great information that will help me in my teaching process in the future. I feel happy and interested to watch our great outcomes in this course. I feel proud to be one of the students in this course. I feel fortunate and grateful for my professor for his great choice of the material he prepared. I feel strong, thoughtful, and responsible in my coming experiences in teaching.

Another student wrote a similar comment:

Although it was a challenging experience for us to accomplish accumulated duties at a particular time, it was an enjoyable and fruitful experience for Samar and I. We could finally establish interesting application and trustworthy webpage that includes the essential knowledge required for integrating modern educational tools. However, we included other past methods of interactive teaching and learning because there are some schools are not equipped with newly-invented tools of educational technology. Our significant project considers teachers’ development and includes interactive digital material that can reinforce students’ abilities. This new project can be described as a constructivist, creative and effective for autonomous learners.

**Discussion**

The analysis of the reflective journals revealed a number of interrelated themes. Throughout their reflective journals about their experiences in the course, the students identified a number of themes. Most of the students identified key aspects such as: practical projects (web page construction, electronic books, and research paper), websites evaluation topics/materials and presentations, discussion, and online responses. The most effective theme as perceived by the participants is that of practical projects. All of the participants without exception mentioned practical projects as one of the most useful elements in the course. Most of the participants felt that the practical projects and website evaluation equipped them with the necessary technological knowledge and exposed them to effective teaching methods and strategies, classroom management strategies.

Additionally, most of the participants mentioned that the covered topics and their own presentations, in addition to the presentations delivered by their classmates, were useful and of great benefits. They described the course content and the presentations as a valuable and interesting experience and the materials that were covered were up-to-date, rich, clear, comprehensive, authentic, and relevant. They felt that the covered materials helped them develop their critical and creative thinking strategies and equipped them with the 21st-century skills.
In addition to identifying good aspects of the course, the students described how the course contributed to their professional growth. This finding is in line with other studies (Burhan-Horasanli & Ortaçtepe, 2016; Farrell, 2013) that emphasized the importance of practical projects in developing students' identities as teachers and preparing them to practice in real-life teaching situations.

The students identified a number of issues that contributed to their professional growth such as effective preparation and use of Power Point presentations, practical projects, and employing technological devices, class management strategies, and expanding knowledge and critical thinking skills. Accordingly, there was a consensus among the students that the course helped them prepare effective Power Point presentations as they became competent in using presentations and other technological devices. This resulted in shaping their professional identity. Additionally, the students felt that through the practical projects, they gained a variety of teaching skills that will be helpful in their future career. In addition, all the projects were excellent in developing the students’ abilities to study. Accordingly, they felt that the various projects helped them in their teaching profession. They learned novel methods based on practical and empirical research which helped them improve their teaching styles and practices. As a result, they described it as a valuable teaching project that resulted in great works. The practical projects equipped them with practical methods and strategies, and most importantly putting the theoretical part into practice and thus contributed to their professional growth.

Furthermore, the students felt that the course contributed to their professional growth in terms of offering them effective classroom management strategies. Most participants highlighted the role of class management strategies in prompting their professional growth; the participants believed that the course helped them in class management. When the students were asked to offer some suggestions to improve the course, they suggested reducing the number of assignments, offering more practical projects and technical training workshops, and preparing labs that are rich with technological devices and internet resources. Finally, the students described their experience in the course with many positive experiences such as interesting, enjoyable, and many others.

**Conclusion**

It is evident from the experiences of the students in the course that they benefited from the different elements of the course under study. They benefited from the practical projects and the experience helped them in their professional development. It is a clear finding in this study that the participants liked the practical aspects of the course such as developing and evaluating websites that help them to enhance their instructional activities. Interestingly, one of the most significant points from this study entails that the more the students are offered opportunities to practice in real contexts, the wider the possibility their identity and profession as teachers is developed. On the other hand, the participants believed that the course can be improved by increasing the practical projects and reducing the number of theoretical assignments. Based on the results of the study, it is strongly recommended that future course focus more on the practical aspects in such courses as they are more appealing to students and contribute positively to the learners' professional development.
About the Author:
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References:


Appendix A

1. Which aspects of the graduate Technology in Language Learning and Teaching course were perceived as the most useful for them?
2. How do graduate students perceive their professional growth as a result of the Technology in Language Learning and Teaching course?
3. What suggestions do graduate students have for improving the Technology in Language Learning and Teaching course?
4. What adjectives graduate students used to express their feelings about developing a digital book and other applications in the Technology in Language Learning and Teaching course?

Appendix B: A summary for the most frequent adjectives

<table>
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<tr>
<th>Adjective</th>
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<tbody>
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<td>Interesting</td>
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<td>Helpful</td>
<td>2</td>
<td>Attention-grabbing</td>
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<td>Enjoyable</td>
<td>8</td>
<td>Time and effort saving</td>
<td>2</td>
<td>Critical thinking provoking</td>
<td>1</td>
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<td>Amazing</td>
<td>7</td>
<td>Enthusiastic</td>
<td>2</td>
<td>Enlightening</td>
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<td>Brilliant</td>
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<td>Fabulous</td>
<td>1</td>
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<td>Educational</td>
<td>2</td>
<td>Fantastic</td>
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<tr>
<td>Effective</td>
<td>5</td>
<td>Beneficial</td>
<td>2</td>
<td>Fruitful</td>
<td>1</td>
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<td>4</td>
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<tr>
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<td>4</td>
<td>Wonderful</td>
<td>2</td>
<td>Inquiry-based project</td>
<td>1</td>
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<td>4</td>
<td>Trustworthy</td>
<td>2</td>
<td>Marvelous</td>
<td>1</td>
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<td>Novel</td>
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<td>Challenging</td>
<td>2</td>
<td>Professional</td>
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<td>4</td>
<td>Comfortable</td>
<td>2</td>
<td>Rich</td>
<td>1</td>
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<tr>
<td>Useful</td>
<td>4</td>
<td>Motivating</td>
<td>2</td>
<td>Routine breaking</td>
<td>1</td>
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<td>2</td>
<td>Thought-provoking</td>
<td>1</td>
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<td>3</td>
<td>Great</td>
<td>2</td>
<td>Trustworthy</td>
<td>1</td>
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<td>3</td>
<td>Practical</td>
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<tr>
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<td>Well-designed</td>
<td>1</td>
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<tr>
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<td>3</td>
<td>Stimulating</td>
<td>2</td>
<td>Well-implemented</td>
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</tr>
<tr>
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<td>3</td>
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<td>2</td>
<td>nice</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total**: 152
Engaging Students through Blended Learning Activities to Augment Listening and Speaking

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Abstract
Present study examines pedagogically the effect of blended learning activities to augment listening and speaking at tertiary level. Teachers provided content online that allowed measuring the students’ engagement, satisfaction, teacher’s role, and content and examination. Using the tools online on Blackboard®, discussion on forums and listening activities, the teacher provided the blended learning activities. The three-step strategy (3SS) framework was adopted for language learning. It provided students strategies that generated, supported and manipulated the blended learning activities for learning in the face to face sessions. The study investigates how blended learning activities motivate the engagement of students, their satisfaction, the role of the teacher, content and assessment from the students’ point of view. The study uses a population of 38 students from two sections of a listening and speaking class (control G1 n = 20 and blended G2 n = 18), a placement test, examination results and responses from a questionnaire as instruments for examining the effect of blended learning activities on the students’ engagement, satisfaction, teacher’s role, content and examination. The results using descriptive statistics demonstrate positive effects of using blended learning activities in supporting the improvement of students’ learning on listening and speaking at elementary level. In brief, using the evidence from the study reveals that exposing foundation year students to blended learning activities have positive effects on students’ engagement, satisfaction, teacher’s role, content and examination when learning English. The paper situated itself in the discussion of providing enriched language learning content online for supporting and measuring learning through the objective measurement of the content from the opinion of the students.

Key Words: blended learning, EFL online content, engagement, learning strategy, pedagogic innovation, student opinion

**Introduction**

**Issues of an environmental nature**

The students enrolled in language programs at tertiary level need to demonstrate English language competence. Demonstrating competencies when using the English language in an online environment involves innovating when teaching English, producing the language and using the language to achieve academic and social purposes (Abou-El-Kheir & MacLeod, 2017; Cakır & Solak, 2015; Carroll, 1963; Gün, 2018).

Pedagogic innovation can involve the mixing of language learning content with online activities for promoting the abilities of college-level language learning students by using blended learning activities in online platforms. Indeed, the teaching of English language currently includes opportunities for mixing physical classroom activities or face to face (f2f) with the activities online in the blended platform (BL) (Bataineh, Banikale, & Albashtawi, 2019; Lamri & Hamzaoui, 2018; Tosun, 2015; Wilkinson, 2016). Blended learning activities involve teachers mixing f2f sessions with content uploaded online to practice listening and speaking activities because students expect the integration of technology along with their learning career (Hockly & Clandfield, 2010; Krake, 2013). The focus on pre-listening activities through the interaction of language learning pedagogy online using BL provides unique access to understanding how students and teachers take advantage of the integration of technology. Supporting the unique access considers what impact BL has on learning English in a listening and speaking course over a semester during a Foundation Year at King Abdulaziz University (KAU) in the Kingdom of Saudi Arabia.

Tosun (2015) introduces BL learning, as the locus for learning, with learning strategies as the framework for observing changes in learning. Examining how learning and BL merge provides access to where teachers can provide students content as well as collect the learning from the interaction with the content. Teachers mix online tools that support students in learning English online (Hockly & Clandfield, 2010; Lamri & Hamzaoui, 2018; Lightbown & Spada, 2013). It is not only the students that have changed from the integration of technology, but teachers have also become students learning how to incorporate suitable learning techniques with new learning platforms. When teachers successfully gauge content and activity for BL, Krake (2013) concludes that language learning becomes successful.

The primary purpose of this study is to examine the effect of BL in supporting the improvement of students’ learning on listening and speaking in elementary level English course at KAU. Successful objectives achievements for the paper becomes studying how BL motivated the engagement of students in the course. Moreover, the paper also studies student satisfaction, teacher role, and content and assessment from the students’ point of view. The review of the literature provides the key terms of the study as well as how the previous research in the area supports the
unique position for using BL for supporting the improvement of students’ learning of English on listening and speaking course.

**Literature Review**

Tosun (2015) defines BL as an approach to impact the learning of vocabulary and a process that is planned to be applied in a language course. As an approach, Oliver and Trigwell (2005) define BL approaches along pedagogical lines giving concern to learning theories. Teachers can construct content; students can also construct meanings which indicate their learning. Also, traces of the content, students’ assessments, and interactions online can provide observations for the planned activities taking place online. Using BL to support different learning theories is the approach that indicates how BL provides a window for accessing learning. The learning that occurs can be planned and measured depending on the differences between what students bring to the learning and what they gain.

Similarly, Oliver and Trigwell (2005) discuss the use of BL to gauge the variation. Where the planned activities applied on a course meet learning objectives, assessing students learning after the interaction with the activities can provide what it was that the students have learnt. Hence, the variation becomes the difference in learning which students at KAU use to improve their language learning skills.

In their recent study on BL and learning English reading skills, Lamri and Hamzaoui (2018) emphasise the importance of English for comprehension of subject knowledge. What is interesting in placing learning English and the speciality that students will eventually be exposed to, such as law, business or computer studies is the subject knowledge. The connection of using BL to meet the required level of competence when learning English opens the space for the challenges of overcoming the mixture of BL activities, learning English and using the tools in an online environment (Wilkinson, 2016). Furthermore, Tosun (2015) surveyed students and contextualised BL as a means for improving pedagogy. The aim was for exploring the impact of BL on tailoring content to the needs of the students learning vocabulary, rather than the activities that prepared students for online engagement. As teachers and students have become accustomed to the use of language teaching materials for learning English, one challenge to the teacher is how to support students listening and speaking using content blended for online activities. Taking the challenge to mean the opportunity for a teacher to harness the tools online in the learning management system called Blackboard® moves the discussion closer to the language theories that have been used to promote learning in the classroom which might also have a place in the listening and speaking classroom to promote listening and speaking activities.

This research takes place in a listening and speaking classroom at KAU. The underlying principles of listening and speaking activities are built around top-down and bottom-up processing skills (Beretta, 1991; Ellis, 2010; Macalister, 2016). Thus, learning is meaningful to students when the BL provides support for the face to face (f2f) session. So, the BL model provides activities online for students to build the students’ skills around the opportunity to develop their knowledge of the English language when listening and speaking in class, the top-down process (Hoopingarner,
2009; Nation & Newton, 2009). Also, processing target words identified for decoding the items contained in the vocabulary items support what students do within a bottom-up process. One key issue with teaching students English with content that contains cultural topics is the support for building the top-down processing of language. Using the BL activities, the instructions for students to use language that will be used in the f2f session provide opportunities for building what the students need to know when speaking about the target language topic. In their recent study, Ali, Shamsan, Guduru and Yemmela (2019) identify the power of active communication engagement which supports the confidence of students because students have the opportunity to understand the differences between using content when they need to be fluent and using content when they need to do to be accurate. When the students have access to the content, and they carry out the activities that improve their listening, such activities support the learning, which encourages students to continue learning. Also, when the students interact with the content online and then speak in the classroom due to the shift in the learning, students demonstrate the effect of the content on their learning.

Evaluating the interaction of the students at Foundation Year in King Abdulaziz University (KAU), it begins with placing students according to their language placement test results. When a teacher is assigned a speaking and listening class, the content based on the Common European Framework (CEFR) supports creating content appropriate for the students to interact with the content according to their placement test results. In this context, the BL activities make sense (Lesiak-Bielawska, 2014) because the students meet online and use BL activities to support their learning in the f2f class according to their language proficiency (Alsowayegh, Bardesi, & Garba, 2018; Bielawski & Metcalf, 2003; Read, 2015). Considering the time factor for teaching over an academic semester, the teacher assigned to two different listening and speaking classes offers students who score low marks in the placement test the opportunity to learn online. The students who score higher can be taught in the class with no BL activities online (Oliver & Trigwell, 2005; Russell, 2009; Tosun, 2015). Therefore, a teacher teaching two different classes at the same language proficiency level can provide BL activities for one group and teach 100% f2f with the second group.

**Purpose of the Study**
The principled mixing of content with online tools requires theoretical grounding. The language course aims to improve the communicative competences of the students where students function according to the need for using the language. Adopting the technique (Nation and Newton, 2009), students improve their listening skills by engaging with the following strategies:
Thus, students’ interest in the listening activity is generated using the vocabulary items from the course book to understand interactively – online. Students also learn how to select a strategy that allows them to manipulate situations where vocabulary is unknown. The manipulation of the activity creates familiarity when students join the f2f session by manipulating strategies when they listen and speak about the topics in class. The effect of generating the 3SS on students learning and how the learning influences their views of BL activities provides the focus of where we hypothesize that our research will impact through our pedagogic innovation to mix language learning content with online activities for promoting college-level language learning in a blended platform more fluent.

Our research examines the effect of BL in supporting the improvement of students’ learning on listening and speaking in elementary level English course at KAU. To achieve the objectives of the paper, we studied how BL motivated the engagement of students in the course. Moreover, we studied student satisfaction, teacher role, and content and assessment from the students’ point of view. The examination leads us to ask the following sub-questions, which became the focus of the questionnaire about the positive effect of using BL to achieve the following:

- Does BL have a positive effect on the students’ engagement?
- Does BL have a positive effect on the students’ satisfaction?
- Does BL have a positive effect on the teacher’s role?
- Does BL have a positive effect on the contents and assessments?

**Methodology**
The method describes the background of the participants how they were selected from the two sections of the listening and speaking class to join the session without BL activities and the session with BL activities. Furthermore, the description of the activities that students that were exposed to the BL activities is presented as it provides the focus for data collection and observing the forum work of the students who work online against the aims of the research.
**Students’ background and selection**

Students’ selection for BL depended on the placement test results, which relied on language items from the CEFR (University of Cambridge, 2011). Students who scored A1 remained on the course and students who scored higher were given a choice to remain or proceed to the next level. Hence, the analysis of learning used the CEFR because the learning conducted was based on the items from materials that relied on the CEFR. All the students joined the language program from high school. The students were on a foundation year course with completion leading to professional qualification programs taught in the English language.

**Students’ demography**

Using a proficiency test placed 38 male English language learners at Elementary A1-level (University of Cambridge, 2011). Two sections, according to the college regulations, were opened. Group 1 (G1 n=20) and Group 2 (G2 n=18) formed the basis of the two groups that informed the research. Table 1 below highlights the breakdown of the learners’ demography, proficiency and instruction format at the start of the semester. The academic semester (14 weeks) was used to inform the research.

Table 1. Students’ Demography

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Language Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1 - control</td>
<td>20</td>
<td>A1 – elementary</td>
</tr>
<tr>
<td>G2 - blended</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

**Framing the examination**

This study asked what the effects of BL are in supporting the improvement of students’ learning on listening and speaking in elementary level English course at KAU. We utilized a case study design to elaborate on how BL activities supported students’ learning English in a listening and speaking class. The students’ in the researcher’s class were selected due to the accessibility and availability of the students for conducting the research (Poon, 2013; Yin & Davis, 2007). Students were notified about the research and none were identified by the ethical standards of KAU research ethics.

At the end of the semester, we used data from the G1 and G2’s placement and examination results. Also, we used a questionnaire that asked closed-ended questions to gather data from the blended group, G2 about their views of engagement, satisfaction, the teacher’s role, the content and assessment (Cohen, Manion, & Morrison, 2005; Ginns & Ellis, 2007). Furthermore, G2 worked in discussion forums and quizzes created to meet the overall course’s learning objectives (University of Cambridge, 2011). The researchers collaborated online and used excel, word processor and emails to exchange data and editing of the research. The researchers included the students’ the classroom teacher, an associate professor of English at the English Language Institute (ELI) and the dean of the Deanship of e-Learning and Distance Education (DELDE).
Learning online

What was the learning environment?
Lamri and Hamzaoui (2018) and Wilkinson (Wilkinson, 2016) discuss the features teachers can use to overcome the challenges of using BL tools in an online environment. Our online learning environment was in Blackboard®. Wilkinson describes asynchronous learning as the capacity for accommodating the place and time students select to log online and use the activities the teacher provides for meeting the learning objectives. We took advantage of the discussion and gathered the students’ interaction Blackboard® by placing content online for students to interact with asynchronously.

What did the teacher do?
The teacher covered the content in the course book in Blackboard® by providing the students with a place to practice the language in a safe and personalized environment. Wilkinson (Wilkinson, 2016) accurately contextualizes the tools in Blackboard® accessing where the activities reside through clicking on links connected through the internet. Lamri and Hamzaoui (2018) present the difficulty of language understanding of vocabulary eased through carrying out BL activities. The teacher linked the challenges of cultural understanding of the video activities students must respond to before watching the video activities. In the classroom, students were required to have prior knowledge of the vocabulary. Due to the time shortage for using the allotted hour for each class, the teacher provided the difficult words online through tests that practice understanding the vocabulary. Also, the discussion forums gave students opportunities to practice using the language in context before they were asked similar questions in the f2f sessions. G2 needed more time to learn the vocabulary. Then G2 used the contents on the tools like the forum and quizzes to practice using the language safely. To ensure the link between what students learnt online with the requirements of the course, the teacher had to ensure the content created online aligned with what the students learnt using the BL activities and the course requirements. Also, the teacher emphasized participation while online without focusing on G2’s mistakes to encourage more fluency online and a lack of hesitation in the f2f session due to a lack of emphasis on accuracy.

What did G1 students do?
The students in G1 were led by the teacher who facilitated the pre-listening and cultural background check during the regular classroom sessions. Then G1 proceeded with the listening and follow up activities according to the outline in the coursebook. Also, G1 was not asked to do any follow-up activities outside the allotted activities from the syllabus.

What did G1 students do?
G2 logged onto Blackboard® using their KAU provided username and password using the KAU-Blackboard® portal available at http://lms.kau.edu.sa/. Once logged on, G2 carried out the activities created in the online discussion forum and the quizzes. The discussion was mainly conducted in the Forum created between the start of the semester in September 2017 (Forum 1) and towards the end of the semester in December (in Week 5: Describing yourself).
How did the teacher create BL activities?
At the start of each chapter in the listening and speaking course book (LSB) is the cultural and vocabulary content as well as a link to the central theme in the course book. The LSB requests the teacher to provide the cultural and vocabulary content as homework or emphasise the importance of students having the language as background knowledge before the listening activities. As the coursebook practice-vocabulary tasks were not difficult to replicate online, the teacher created links to videos online through Blackboard® and asked the students to identify the vocabulary items. Also, the listening activities were tested through the quizzing tools of Blackboard® so students could guess and become accustomed to what would be expected of them in the f2f session through the online activities. When the students completed the tasks, G2 was allowed to be familiar with how the vocabulary related to the topic of discussion and G2 could ask relevant questions online and in class about the language before G2 were exposed to the f2f sessions.

How did G2 use the BL activities?
Each activity using the LSB lasted an hour. An hour in the f2f session was valuable time, especially when the teacher had mixed ability students in G2. Before each f2f session and the start of the activity using the LSB, the teacher asked the students to visit the link on Blackboard® and carry out the activities. Also, the college’s language laboratory provided internet access which G2 could access on Thursdays. Then in the f2f session, G2 attended and proceeded to use the coursebook activities without spending more time than necessary on pre-listening and cultural contextualization activities because of G2’s exposure to the content online which provided support for G2’s understanding of the listening activities.

Furthermore, the teacher created links to the forum in Blackboard® and asked G2 to respond to questions that followed up the listening which prepared G2 for speaking activities in subsequent f2f sessions. G2 worked on these sessions outside their regular classroom hours online. The teacher had to be creative in creating the links because the course book materials only provide activities without the necessary information about the cultural background checks students need.
to have access to when they need to understand English as spoken in North America and Canada according to the Interchange Video Activity course book. Therefore, the time spent in teaching G2 in the classroom supported more individualized and group activities which G2 prepared and practised for online, reducing the time the teacher spent explaining to the class. G2 also carried on working on the activities individually and in groups outside their regular classroom sessions using the links provided online.

Results
The results section begins with the analysis of the results from the placement test given to all students at the start of the semester. Also included in the results section is the examination results from G1 and G2 at the end of the semester covering all the work that both groups carried out to meet the objectives of the listening and speaking course. After that, G2’s responses to the questionnaire provided after their formal written final examination will be analysed. Finally, the themes that emerged from the work of G2 will be analysed.

Placement test results
The placement test was carried out at the start of the semester in September 2017. Each student who joined the program was assigned a unique number and password for accessing Blackboard®. The teacher who taught the course also had access to each student’s placement test result as well as when the test was conducted. However, since a placement test (see Table 2 below) for the entire college requires collaboration, the actual test date was available online with a time stamp of when the students took the test. As the researcher was teaching both G1 and G2, access to the test results for both groups were available for the researcher to access Blackboard®.

Table 2. Descriptive statistics of the placement test results administered at the beginning of the course

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1 – control</td>
<td>41.550</td>
<td>19.72302</td>
<td>4.41020</td>
</tr>
<tr>
<td>G2 – blended</td>
<td>31.400</td>
<td>14.61218</td>
<td>3.26738</td>
</tr>
</tbody>
</table>

Hence, the statistical analysis of the results for the control group or G1 and the BL group or G2 provides access to both the results of the placement test and the examination marks allotted at the end of the semester (see table 3 below). The results from Table 2 confirm that G1 (mean 41.5500 SD19.72302) performs better than G2 (mean 31.4000 SD 14.61218) on the placement test.

Also, the same teacher taught G1 and G2. Therefore, what G1 and G2 were exposed to regarding content for achieving the aims of the program were similar. Both G1 and G2 had to complete activities that involved collecting results from the activity to meet the aims of the program, as presented in Table 2. However, as we established, to select the group to join the BL group, the teacher decided to work with G2 online and provided G2 support due to their low
performance during the placement test. The members of G1 did not all take the placement test, and three members could have changed their class to join a level B language proficiency class because their listening and speaking competencies during the activities in the class were above the A1 level. The placement test result shown in Table 3 included only grammar and vocabulary items that were based on the CEFR. Finally, all members of G1 and G2 remained in their respective sections throughout the semester, and the members of G2 were in the correct language proficiency level of A1 according to their placement test results taken at the start of the academic semester in September 2017.

**Examination results**

The results from Table 3 shows the significantly better performances of G1 over G2 in the total activity marks. The results for G1’s achievement show a total mean of 12.4091 SD 3.64704 and G2 achieved a mean of 11.6316 SD 3.13068. However, in the culmination of the total marks for the activities in the final examination, the four activities in Table 3 supported the improvement and achievement of G2. The significant improvement over the semester can be attributed to the activities and support given to G2 online and in the f2f sessions. G1 could not provide access to their work online, nor could they conduct activities beyond using the course book. Hence, G2 working online and had access to their work online, which they could repeat with no cost of marks which can improve confidence and fluency.

Table 3. *Descriptive statistics of G1 and G2 program aim achievement results at the end of the course*

<table>
<thead>
<tr>
<th>Activity and marks for achieving course aims (18)</th>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz 5</td>
<td>G1</td>
<td>2.8545</td>
<td>1.27785</td>
<td>.27244</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>2.8726</td>
<td>1.25667</td>
<td>.28830</td>
</tr>
<tr>
<td>Portfolio work 3</td>
<td>G1</td>
<td>2.7273</td>
<td>.88273</td>
<td>.18820</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>2.8421</td>
<td>.68825</td>
<td>.15789</td>
</tr>
<tr>
<td>Listening 5</td>
<td>G1</td>
<td>3.3918</td>
<td>1.27192</td>
<td>.27117</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>2.7432</td>
<td>1.38488</td>
<td>.31771</td>
</tr>
<tr>
<td>Speaking 5</td>
<td>G1</td>
<td>3.3918</td>
<td>1.27192</td>
<td>.27117</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>3.1489</td>
<td>1.47097</td>
<td>.33746</td>
</tr>
<tr>
<td>Total</td>
<td>G1</td>
<td>12.4091</td>
<td>3.64704</td>
<td>.77755</td>
</tr>
<tr>
<td></td>
<td>G2</td>
<td>11.6316</td>
<td>3.13068</td>
<td>.71823</td>
</tr>
</tbody>
</table>

**Questionnaire response**

The results from the questionnaire will be analyzed based on the positive effect of BL on following: (1) students’ engagement; (2) students’ satisfaction; (3) on teacher role; and finally (4) on content and assessments. The tables are presented with Table 4, and Figure 5 shows the descriptive statistics and graphical representation of the effect on the students’ engagement. Tables 5-7 and Figures 6-8 have been placed as items in Appendix A labelled from A1 to A3. All references in the text to the figures will be according to their table numbers. The first table and

Arab World English Journal
www.awej.org
ISSN: 2229-9327
Engaging Students through Blended Learning

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The figure will be Table 4 followed by the tables in Appendix A. Each result from the questionnaire will also be related to the relevance to the sub-research questions and their effect on the positive effect of BL and the learning of the students.

Table 4: Descriptive statistics of the effect on the students’ engagement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>Not agree</th>
<th>Not Strongly agree</th>
<th>Mean</th>
<th>SD</th>
<th>الإجابة لصالح</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Blackboard® is an interesting way to learn English.</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4.167</td>
<td>0.92</td>
<td>Agree</td>
</tr>
<tr>
<td>The teacher’s recommendation of websites through Blackboard® was necessary</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>3.889</td>
<td>1.18</td>
<td>Agree</td>
</tr>
<tr>
<td>The teacher’s introduction to the content of the materials on Blackboard® was necessary</td>
<td>8</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4.333</td>
<td>0.69</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>The teacher’s use of the discussion forums was effective</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4.222</td>
<td>0.81</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Students opinions average</td>
<td>Mean= 4.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SD=0.209</td>
<td></td>
<td>Agree</td>
</tr>
</tbody>
</table>
Does BL have a positive effect on the students’ engagement?
Table 4 focuses on the students’ engagement. The results in Table 4 show that G2 agreed with the positive effect of BL in engaging them in the course, which confirms our first sub-question. Notably, the recommendation of websites through Blackboard® and using Blackboard® was an exciting way to learn English, as illustrated in Figure 5.

Does BL have a positive effect on the students’ satisfaction?
Table 5 and Figure 4 show that G2’s satisfaction was neutral, but they agreed about their satisfaction for understanding the Blackboard® instructions and internet access. G2 also agreed that understanding the instructions for the Blackboard® system supported their satisfaction. The overall opinion of the students (mean 3.2776 SD0.240) confirms the second sub-question because most of the students did not have issues connected to the technical aspects of learning online while doing the activities online.

Does BL have a positive effect on the teacher’s role?
Table 6 and Figure 5 show that most of G2 strongly agreed on the teacher’s role in introducing the content location online. G2 also strongly agreed on the effectiveness of teacher use of discussion forums and the use of website links through Blackboard®, which confirms the third question.

Does BL have a positive effect on the contents and assessments?
Table 7 and Figure 6 show that G2 agreed about the appropriateness of the content and assessment in the course. The result confirms the fourth question. They strongly agree on the effectiveness of taking homework through Blackboard® and that the application of Blackboard® is appropriately linked to the content of the course.

How did G2 use the forum activities?
As indicated in Figure 2 above, there was a forum that was prepared by the teacher. In one of the six forums, students had to introduce themselves by sharing information about where they lived in Jeddah, their likes and dislikes about sports and which program they consider studying when they complete their English course. The teacher provided a sample description for students to copy so that the students can see both what is expected from them as well as narrow the variable language different students have been expected to exhibit (Ellis, 2010, p. 22). Analyzing the errors using online and document checker showed the errors displayed in Table 8 below.

Table 8. Descriptive statistics of the placement test results administered at the beginning of the course

<table>
<thead>
<tr>
<th>Error</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling</td>
<td>48</td>
</tr>
<tr>
<td>Grammar</td>
<td>48</td>
</tr>
<tr>
<td>Punctuation</td>
<td>15</td>
</tr>
</tbody>
</table>
The 48 spelling errors mainly centered around proper and common nouns because Arabic does not distinguish between the first letter and its capitalization in proper nouns like the students’ names, the error in spelling focused on the two types of nouns. Other errors included the ordering of the letters while typing such as placing the consonant before the vowel in spelling word. The grammatical errors focused on the absence of determiners, such as a distinction of using the correct articles with words that begin with vowels or the absence of definite articles. Also, because of the way text is recognized in digital format, most of the use of the personal pronoun I was in lower case as well as when it was used to describe where the students were from (for example students wrote – *iam from jeedah*). Finally, punctuation online is a significant type of error the students were not accustomed to identifying with their language variable. For instance, spaces after the last word and a full stop or absence of a comma was a common error observed in the forum activity of the students.

**Discussion**

The paper has taken up the challenge of mixing content for online and f2f listening and speaking sessions using BL activities with a group of college-level learners on a foundation year course at A1 English proficiency level (Hockly & Clandfield, 2010; Krake, 2013; Lesiak-Bielawska, 2014). Competently using BL (Wilkinson, 2016) provides students and teachers planned Oliver and Trigwell (2005) opportunities to take advantage of the integration of technology. The 3SS theoretical framework adapted from Nation and Newton (2009) allows students in the f2f listening and speaking session to manipulate vocabulary as content that supports the manipulation of the content the students have been exposed to online during the use of the BL activities. The challenge and opportunity through examining 3SS have culminated in achieving the positive effect of BL on the students’ engagement, satisfaction, the teacher’s role and finally, the content and assessments.

The placement test and examination test of the students begin the selection process of creating the content for supporting the f2f listening and speaking sessions with BL activities. G1 have performed better overall than G2 on the placement test and the examination results (see Table 3). We have supported G2 with BL activities that have encouraged G2 to view the teachers’ role (see Table 6) as having positive effects on maintaining interest in the topic and understanding the vocabulary for the topic to be used during the f2f session (Nation & Newton, 2009) — achieving the interest edges learning closer towards what Lamri and Hamzaoui (2018) critically discuss as the learning purpose. The 3SS framework has been framed for generating the students’ interest, and ability to both deduce and infer from the content online to aid both listening comprehension and to speak confidently and competently in the f2f session.

The access to the content and the interaction in a safe environment also encourages the students joining the program to want to continue learning due to the modification of the language content to reduce what can be described as complexity (Bataineh et al., 2019; Lightbown & Spada, 2013; Tosun, 2015). The engagement (see Table 4 and Figure 3) with the content on Blackboard® and the use of the tools provided have ensured that G2 moved towards achieving the learning objectives by understanding the requirements of the instructions on online and improving their skills through . The response of G2 (see Table 5) on their level of satisfaction suggests a positive response. Notably, the incorporation of homework and applying the link with the f2f session (see
Appendix A.3  Table 7 and Figure 6) links with e-learning component that provides the power of self-paced learning to shine on the learner and what the learner can achieve given the opportunity to interact with a BL activity in listening and speaking course. Interacting with what is familiar during the f2f session has allowed the members of G2 to manipulate the Blackboard® instructions provided by the teacher when asked to use the forum and quiz activities. Also, the accessibility to online content for educational purposes furthers the discussion on the types of difficulties Lamri and Hamzaoui (2018) identified as part of understanding what the teacher does and how to link the learning environment with learning objectives to support students’ learning abilities. Explaining the support of students in a f2f session through engaging with BL activities enable the students to understand the language. Lightbown and Spada (2013) generalised how modifying the content on the BL activities encourages understanding. In principle, the mixing encourages the understanding of using 3SS to enhance how the students improved their listening strategies and improved their academic performances (Nation & Newton, 2009). For example, in Table 8, the type of errors the students exhibited closely resembled how the students perceived the language about completing the forum objectives. However, observing the distinction visually with the teacher giving feedback on the information and noting the errors provides access to what can be taught to the A1 targeted students in the f2f session. Thus, the feedback is given as shown by the student and teacher (see A.1. Forum activity in Figure 7 Forum 1 activity) allow students online to calmly show what they know of the language which can help the teacher provide more guidance in the f2f session. We characterize such observation, guidance and capturing of the work of students at KAU as meeting the broader goal for researching the effect of innovating in the classroom (Ellis, 2008).

Conclusion

The findings of the study demonstrate that our experimental research has been a successful study of how listening and speaking students can be supported online to improve their engagement. The research has examined the effect of BL in supporting the improvement of students’ learning on listening and speaking in elementary level English course at KAU using BL activities online. The activities from Blackboard®, students, result from their placement test, examination results, G2’s responses from the questionnaire and what the teacher has carried out have recorded, measured and presented.

Based on the recorded, measured and presented findings of this research, we accept that the use of BL has been effective in promoting the students in Group 2’s learning on the listening and speaking course at the language program at KAU. The acceptance has been based on the results we have discussed which indicate that the activities of the students on Blackboard® for conducting a formal examination as well as allowing the responses from the questionnaire have been carefully conducted on the students in G2 who were exposed to BL activities on Blackboard® at KAU. The findings describe what a teacher does on Blackboard® to improve the learning of listening and speaking of English language learners. Also, the study paves the way for finding out how to relate the activities with other learning theories based on further demonstrating the learning potential of students when setting up for successful English language learning using BL activities online. While the study has not related the activities of G2 as a sample of a larger population from the college, the research has focused on the population of language learners in G1 and G2 with G2 not being the subset of the population, but the actual sample selected based on the researchers supporting the low placement performance of G2. Therefore, the research using the content for
listening and speaking English online has been innovative for supporting G2 produce the language and use the language to achieve academic and social purposes using online blended learning activities.

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Acknowledgements
The research has been carried out with members of the Deanship of e-learning and Distance Education and the English Language Institute at KAU. Finally, we also send our special
Appreciation to Jeddah Community College (JCC) for providing the practitioner-researcher support and access for conducting this research.

References
Council.

**Appendix A. The descriptive statistics from the responses of G1 to the questionnaire**

**A.1. Descriptive statistics of students’ satisfaction**

**Table 5. Effect on the students’ satisfaction**
Engaging Students through Blended Learning

 Arenh-Martins, Bardesi, Garba & Sipra

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>Not strongly agree</th>
<th>Mean</th>
<th>SD</th>
<th>إجابة</th>
</tr>
</thead>
<tbody>
<tr>
<td>I spent more time supposedly studying through Blackboard®.</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>3.33</td>
<td>0.97</td>
<td>neutral</td>
</tr>
<tr>
<td>Disconnection when download educational resources available on the Internet.</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>2.88</td>
<td>1.45</td>
<td>neutral</td>
</tr>
<tr>
<td>Allow your computer to be used permanently</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2.83</td>
<td>1.58</td>
<td>neutral</td>
</tr>
<tr>
<td>Understand the instructions for the Blackboard® system</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3.83</td>
<td>1.20</td>
<td>agree</td>
</tr>
<tr>
<td>Internet access to use Blackboard®</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>3.5</td>
<td>1.42</td>
<td>agree</td>
</tr>
<tr>
<td>Students opinions average</td>
<td>Mean= 3.2776</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**Figure 4.** Effect on the students’ satisfaction

A.2. Descriptive statistics on the teacher’s role
Table 6. Descriptive statistics effect on the teacher’s role

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>Not agree</th>
<th>Not Strongly agree</th>
<th>Mean</th>
<th>SD</th>
<th>الإجابة لصالح</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor suggestions for websites through Blackboard® is essential.</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4.167</td>
<td>0.79</td>
<td>agree</td>
</tr>
<tr>
<td>The professor's introduction to the content of the material on the</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4.167</td>
<td>0.86</td>
<td>agree</td>
</tr>
<tr>
<td>Blackboard® is necessary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using a forum from professor for discussion is effective.</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4.438</td>
<td>0.73</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Using website links by a professor through Blackboard® is effective.</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4.278</td>
<td>0.83</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Students opinions average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean=4.2625</td>
<td>SD=0.056</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>
A.3. Descriptive statistics on the content and assessments

Table 7. Effect on content and assessments

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>Not agree</th>
<th>Not Strongly agree</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placing homework through Blackboard® is effective.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.278</td>
<td>1.02</td>
</tr>
<tr>
<td>Blackboard® teaching tools are appropriate classroom teaching supplements.</td>
<td>11</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackboard® teaching tools are appropriate for students' skill levels.</td>
<td>4</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3.833</td>
<td>0.92</td>
</tr>
<tr>
<td>Implementation / application of Blackboard® in an effective manner</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>4.056</td>
<td>1.06</td>
</tr>
<tr>
<td>appropriately linked to the scientific content of the course.</td>
<td>6</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4.278</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Figure 5. Effect on the teacher’s role
Figure 6. Effect on content and assessments

A.4. Forum activity
Figure 7. Cycle of the post, reply, response and teacher feedback from Forum 1: Tell the class
A Study of EFL Students' Attitudes, Motivation and Anxiety towards WhatsApp as a Language Learning Tool

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Abstract
This study aimed to explore the impact of WhatsApp on enhancing Saudi EFL students' language skills and areas. It also investigated EFL students' attitudes, motivation, and anxiety towards learning English via WhatsApp. The sample comprised 55 male and female students studying English at the College of Arts, University of Bisha, Saudi Arabia. A closed-ended questionnaire was used to collect quantitative data from the sample. The results revealed that WhatsApp has a positive impact on learning English as a foreign language with a score of 3.9 as an overall mean. Students' attitudes towards using WhatsApp for learning English scored 3.4, while the impact of WhatsApp on motivating EFL students to study English scored 3.6 in total. It was also found that WhatsApp reduced students' anxiety with a score of 3.8 as the overall mean. Based on these results, the researchers suggest that WhatsApp should be activated at all stages of English language learning and teaching.

Keywords: anxiety, attitudes, English language learning, mobile language learning (MLL), motivation, WhatsApp

DOI: https://dx.doi.org/10.24093/awej/call5.19
1. Introduction
Technology has permeated every part of our lives and as everything has become digitalised, we find ourselves increasingly inseparable from our mobile phones. Technology participates in advancements in the field of education by enabling access to knowledge worldwide. WhatsApp as an English language learning tool has been studied in various contexts (Çam & Can, 2019; Hashemifardnia, Namazian-Dost, & Esfahani, 2018; La Hanisi, Risdiany, Utami, & Sulisworo, 2018). To the best of the researchers' knowledge, this is the first study to investigate the impact of WhatsApp on English language skills and areas, students' attitudes, motivation and anxiety from Saudi EFL learners' perspective. Thus, the current research explores the impact of WhatsApp learning on four variables, namely, English language skills and areas, students’ attitudes, motivation, and anxiety. The findings will bring about new insights for teachers, learners, and methodologists to consider learning English via WhatsApp. The current study aims to:

1. Investigate the impact of WhatsApp on EFL language learning;
2. Identify the attitudes of EFL learners towards using WhatsApp as a learning tool;
3. Find out the impact of WhatsApp on EFL learners’ motivations; and
4. Examine the impact of WhatsApp in EFL learners’ anxiety.

2. Literature Review
Recently, mobile-assisted language learning (MALL) has entered the fields of English language teaching (ELT) and English as a foreign language (EFL). Familiarity with mobile language learning (MLL) is the result of the widespread availability of mobile phones and smartphones which are owned by nearly all students. Saritepeci, Duran, and Ermi, (2019) report that WhatsApp offers some advantages, for example, it can motivate students to use foreign languages, although it sometimes provides students with ‘superficial information’ (p. 1). Hamad (2017) confirms that students are addicted to mobile applications like Facebook, WhatsApp, Twitter, and Instagram. So the teachers’ task is to engage students by using such applications in English language teaching and learning. The current study thus takes one mobile application, WhatsApp, and investigates its effects on Saudi EFL students at University of Bisha. WhatsApp is a social network application through which people can chat with each other, send pictures, share documents and create groups. The existing literature in the field of MLL and WhatsApp as learning tools is grouped in this study into three sub-categories: (a) WhatsApp and English language learning (listening, speaking, reading, writing, vocabulary, grammar, and spelling); (b) WhatsApp’s effects on EFL attitudes, motivation, and anxiety; and (c) WhatsApp in the Saudi context.

2.1 WhatsApp’s effect on English language learning
The effects of WhatsApp on students’ enhancement of English language learning have been explored by several studies (Ahmed, 2019; Andujar, 2016; Alsaleem, 2013; Asif, 2018; Nasr & Mustafa, 2018). In the Yemeni context, Ahmed (2019) studied the effect of WhatsApp on developing the reading and writing skills of 20 EFL students at Aden University. The findings revealed that WhatsApp motivates students and provides them with opportunities to develop their reading and writing skills. Further to this, with regard to the effect of WhatsApp on language learning, an experimental study was conducted in the Iranian context to check the impact of WhatsApp on students’ vocabulary acquisition. Eighty EFL students were grouped into control and experimental groups. The control group was taught vocabulary face-to-face in a traditional
classroom setting while the experimental group was taught vocabulary via a WhatsApp group. Mahdi (2018) found some evidence in the development of students’ vocabulary as a result of their use of WhatsApp. Another study investigated the impact of WhatsApp on Jordanian students with special reference to gender. It revealed that females performed better at writing than males (Bataineh, Al-Hamad, & Al-Jamal, 2018). To summarise, all the studies presented above reported positive impacts of WhatsApp on students’ English language learning.

2.2 WhatsApp’s effect on students’ attitudes, motivation and anxiety
Positive attitudes "played a vital role in adopting new technologies" (Mohsen & Shafeek, 2016:108). A study conducted at an Anatolian high school aimed to establish students’ attitudes towards using WhatsApp outside their English course. The study found that using WhatsApp outside the English course had a significant effect on students’ self-efficacy beliefs in reading and listening. Moreover, the interview revealed that students experienced emotions of happiness, pride, and joy from using the WhatsApp application in the experiment (Çam & Can, 2019). The correlation between WhatsApp and students’ motivation in language learning/teaching has also been reviewed in many studies (Alamer, 2016; Bensalem, 2018; Han & Keskin, 2016; Khan, 2016). Motivation can be defined as ‘the set of thoughts and feelings that create a person’s interest to do something’ (Alnakeeb, 2012:19). Nunan (2015) notes that there is a strong association between motivation and being a good language learner. A study in Pakistan which investigated reading motivation when using WhatsApp found that although it motivated the students’ reading skills, neither teachers nor parents encouraged the use by students of this application (Khan, 2016).

Anxiety is the psychological state of not being well. Johnson (2004) claims that anxiety ‘cause(s) learners’ block’ (p. 50). Elyas and Rehman (2018) found that anxiety causes negative performance. The effects of WhatsApp on reducing foreign language students’ speaking anxiety was also focused on by studies conducted by Han and Keskin (2016) and Shamsi, Altaha, and Gilanioglu (2019). Both studies found that using WhatsApp activities reduced students’ anxiety and such reduction in their anxiety improved students’ language acquisition. Alrabai (2014a, 2014b) found a significant correlation between reducing students’ anxiety and good performance.

2.3 WhatsApp in the Saudi context
Some studies conducted in Saudi context have focused either on the efficacy of WhatsApp on English language learning/teaching or the effect of WhatsApp on students’ motivation (Ahmed & Hassan, 2019; Çam & Can, 2019; Hamad, 2017; Nasr & Mustafa, 2018). A study examined the effects of Skype, YouTube, and WhatsApp on developing the speaking skills of Saudi EFL students. The findings revealed that such applications have a positive effect on improving students’ oral communication skills (Nasr & Mustafa, 2018). Furthermore, Hamad (2017) conducted a study on first-year students at King Khalid University which revealed that WhatsApp enhances students’ language skills and developed their vocabulary. Another study aimed at exploring Saudi University students’ perceptions about whether WhatsApp can be viewed as a learning platform at the university level supported the view from the students’ perspective in considering WhatsApp as a teaching/learning platform (Alqahtani, Bhaskar, Elumalai, & Abumelha, 2018). Finally, a study focused on the use of the WhatsApp application by students to develop their motivation in informal learning. The study found that students used WhatsApp as a sustainable learning tool outside classrooms even after they had completed a course (Alqasham, 2018). The four studies presented above show that students have positive attitudes towards using WhatsApp as a learning tool and
the application had good efficacy on the four language skills and areas. However, the above results were collected from various studies conducted at different times throughout the Kingdom of Saudi Arabia. The current study takes the variables from one sample at the same time.

3. Methodology
This section presents the methodology of the current research used by the researchers to answer the following questions:
1. What is the impact of WhatsApp on English language learning?
2. What are the attitudes of EFL students towards WhatsApp as a learning tool?
3. What is the impact of WhatsApp on students’ motivation?
4. What is the impact of WhatsApp on students’ anxiety?

3.1 Instrument
The researchers developed a closed-ended questionnaire to collect data from the sample. Questionnaires are defined as ‘forms used in a survey design that participants in a study complete and return to the researcher’ (Creswell, 2012, p. 626). The questionnaire consisted of 16 items with a 5-point Likert scale ranging from ‘strongly agree’ to ‘strongly disagree’. The questionnaire items were subcategorised into four groups, that is, English skills, attitudes, motivation, and anxiety. Both the instrument validity and reliability were checked. The validity was checked by three referees who specialise in Applied Linguistics, then modified according to suggestions made by the referees and finally piloted on ten students to check its clarity before administering to the students. Cronbach's alpha scored 0.87 which shows that the questionnaire was reliable. In order to avoid misinterpretation of the questionnaire items, the researchers translated the questionnaire into Arabic. The questionnaire was distributed via Google Formats by English teachers in the summer term of 2018. After granting permission, the Chairman of the Department of English sent the link to the teachers’ telegram group to share the questionnaire link with English major students.

3.2 Participants
The study sample consisted of 15 males and 40 females Saudi EFL students studying English at the University of Bisha. All the participants have smartphones and use WhatsApp for daily communication as well as for learning purposes. The respondents were between 22 and 24 years old and almost all were in their final year at university. Their English is proficient and they were members of many WhatsApp course groups. They also have sufficient experience using Blackboard as almost all English teachers in the Department of English teach via Blackboard, either as blended learning or supportive learning. This indicates that they are familiar with e-learning and their views are, to some extent, reliable.

4. Data Analysis
4.1 Description of the dependent variables
The descriptive statistics for the main study variables are summarised in Table 1. A scale is considered acceptable if Cronbach’s alpha is 0.70 or higher. The overall Cronbach’s alpha measured 0.87 for the current study. Note that the Likert scales applied to this study ranged from 1=Strongly Disagree to 5= Strongly Agree, so a value above 3 represents a positive attitude while, conversely, a value below 3 represents a negative attitude.
Table 1. Descriptive Statistics for the Study Variables (N=55)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item n</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>16</td>
<td>2.17–4.83</td>
<td>3.90</td>
<td>0.57</td>
</tr>
<tr>
<td>English Language Learning</td>
<td>6</td>
<td>2.17–2.83</td>
<td>3.90</td>
<td>0.58</td>
</tr>
<tr>
<td>Attitude</td>
<td>3</td>
<td>1.33–3.67</td>
<td>3.49</td>
<td>0.78</td>
</tr>
<tr>
<td>Motivation</td>
<td>3</td>
<td>2.00–5.00</td>
<td>3.65</td>
<td>0.76</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4</td>
<td>2.00–5.00</td>
<td>3.82</td>
<td>0.69</td>
</tr>
</tbody>
</table>

4.2 Differences between male and female respondents on the study variables

As can be seen in the series of t-tests reported in Table 2, there were no significant differences between males and females overall or on any of the four scales with regard to their opinions of WhatsApp. This was consistent across the overall scale as well as for each of the four subscales. Note that the ratings for both males and females on the overall scale as well as all the four subscales were favourable (greater than 3).

Table 2. Differences between Male and Female on the Main Study Variables (t-test, N=55)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Home</th>
<th>n</th>
<th>Mean</th>
<th>Variance</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Female</td>
<td>40</td>
<td>3.93</td>
<td>0.77</td>
<td>0.36</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>15</td>
<td>3.83</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>Female</td>
<td>40</td>
<td>3.91</td>
<td>0.31</td>
<td>0.23</td>
<td>0.82</td>
</tr>
<tr>
<td>Skills</td>
<td>Male</td>
<td>15</td>
<td>3.87</td>
<td>0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>Female</td>
<td>40</td>
<td>3.51</td>
<td>0.53</td>
<td>0.27</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>15</td>
<td>3.44</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>Female</td>
<td>40</td>
<td>3.62</td>
<td>0.56</td>
<td>0.39</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>15</td>
<td>3.71</td>
<td>0.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>Female</td>
<td>40</td>
<td>3.88</td>
<td>0.33</td>
<td>0.93</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>15</td>
<td>3.68</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Findings

The mean scores and standard deviations were used to answer the research questions presented in this paper. The first research question, ‘What is the impact of WhatsApp on English language learning?’ aimed to elicit the impact of WhatsApp on the four skills of English language (listening, speaking, reading and writing) and the language areas (vocabulary and grammar). To answer this question, six items in the questionnaire were set. Every item focused on one skill or area. Table 3 shows that there was a positive impact on the majority of students regarding the influence of
WhatsApp on the development of their language skills and areas with an overall mean score of 3.8, with 0.95 as a standard deviation.

### Table 3. WhatsApp Impact on Language Learning

<table>
<thead>
<tr>
<th>English Language Learning</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. WhatsApp helps me improve my listening skills</td>
<td>3.63</td>
<td>1.03</td>
</tr>
<tr>
<td>2. WhatsApp helps me improve my speaking skills</td>
<td>3.78</td>
<td>1.02</td>
</tr>
<tr>
<td>3. WhatsApp helps me improve my reading skills</td>
<td>4.02</td>
<td>0.9</td>
</tr>
<tr>
<td>4. WhatsApp helps me improve my writing skills</td>
<td>3.92</td>
<td>0.91</td>
</tr>
<tr>
<td>5. WhatsApp helps me acquire the right vocabulary</td>
<td>4.25</td>
<td>0.8</td>
</tr>
<tr>
<td>6. WhatsApp helps me improve my English grammar</td>
<td>3.76</td>
<td>1.05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.893333</td>
<td>0.951667</td>
</tr>
</tbody>
</table>

The second research question presented in this paper is, ‘What are the attitudes of EFL students towards WhatsApp as a learning tool?’ The questionnaire items that answer this research question are presented along with mean scores and standard deviations. Table 4 lists three items aimed at answering this research question. Students reported a medium positive attitude towards using WhatsApp as a learning tool with a total mean score of 3.4 and standard deviation of 1.06.

### Table 4. Students’ Attitudes towards WhatsApp as a Learning Tool

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Means</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. WhatsApp is a good addition to learning English language</td>
<td>3.86</td>
<td>0.89</td>
</tr>
<tr>
<td>8. I prefer WhatsApp learning to classroom learning</td>
<td>2.78</td>
<td>1.43</td>
</tr>
<tr>
<td>9. Learning via WhatsApp is easy</td>
<td>3.82</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.486667</td>
<td>1.06</td>
</tr>
</tbody>
</table>

The third research question in this study is, ‘What is the impact of WhatsApp on students’ motivation?’ To answer this research question, three items were included in the questionnaire. Table 5 shows that WhatsApp has a high impact on students’ motivation with an overall mean score of 3.6 and standard deviation of 0.95.

### Table 5. WhatsApp Impact on Students’ Motivations

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Means</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. WhatsApp motivates me to learn English effectively</td>
<td>3.7</td>
<td>1.04</td>
</tr>
<tr>
<td>11. I like learning via WhatsApp</td>
<td>3.51</td>
<td>1.03</td>
</tr>
<tr>
<td>12. I actively participate in WhatsApp group discussions</td>
<td>3.75</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.653333</td>
<td>0.956667</td>
</tr>
</tbody>
</table>

The last research question presented in this study is ‘What is the impact of WhatsApp on students’ anxiety?’ To answer this research question, four items in the questionnaire were included. Table 6 shows that WhatsApp reduces the anxiety suffered by students as a result of learning the
language. The mean score of the overall items on anxiety is 3.8 and a standard deviation of 1, which is considered a high positive impact.

Table 6. WhatsApp Impact on Reducing Students’ Anxiety

<table>
<thead>
<tr>
<th>Anxiety</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. WhatsApp helps me to communicate with my teacher comfortably</td>
<td>4.11</td>
<td>0.79</td>
</tr>
<tr>
<td>14. I feel confident when I chat with my teacher via WhatsApp</td>
<td>4.18</td>
<td>0.86</td>
</tr>
<tr>
<td>15. I don’t feel nervous while using WhatsApp as a learning tool</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>16. I don’t fear making mistakes during communication via a learning</td>
<td>3.2</td>
<td>1.37</td>
</tr>
<tr>
<td>group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.8225</td>
<td>1.005</td>
</tr>
</tbody>
</table>

5. Discussion

The findings regarding the four research questions are presented above. In this section, the discussion of the data will be presented. The first variable is the impact of WhatsApp on language skills and areas. The study found that WhatsApp has a positive impact on the four language skills and areas with a mean score of 3.9. This finding is in line with Alghamdy (2019), who found that the experimental group who were taught using WhatsApp scored higher in the four language skills than the controlled group exposed to traditional teaching. Similarly, Ahmed (2019) found that WhatsApp played an important role in motivating students in their reading and writing skills. Furthermore, regarding the language areas, the findings of the ongoing study are supported by Hashemifardnia et al. (2018), who found that the experimental group taught using WhatsApp scored higher than the control group who had been taught traditionally. The second variable presented is the impact of WhatsApp on students’ attitudes. The study revealed that students using WhatsApp as a learning tool had a positive attitude with a mean score of 3.49. This finding is confirmed by Hanisi et al. (2018) who found that students integrating WhatsApp in their formal learning had positive attitudes because of its easy use and enjoyment for the students. Furthermore, the impact of WhatsApp on motivating students to use the language and develop their skills is the third variable of this study. The findings revealed that WhatsApp has a positive impact on motivating students to use the language with a mean score of 3.6 which is considered a high rate. Khan (2016) reported that even though its use was not encouraged by others WhatsApp motivates students in reading skills. Reducing students’ anxiety is the fourth variable in this study. The findings showed that WhatsApp had a positive impact on reducing students’ anxiety. Han and Keskin (2016) found that using WhatsApp reduced students’ anxiety and improved their acquisition of the language. Similarly, Shamsi et al. (2019) found that students’ use of mobiles reduced their anxiety and encouraged them to talk with others.

6. Conclusion

This study investigated the WhatsApp application as a mobile language learning tool. Such applications can invade our lives in various dimensions. Students' addiction to such applications can be skillfully directed towards enhancing their competence in English. The current study found that WhatsApp had a positive impact on learning English as a foreign language (listening, speaking, reading, writing, vocabulary, spelling, and grammar). This indicates that EFL students positively perceive WhatsApp as a good language learning tool. Likewise, the study showed that WhatsApp motivated students to use the language and reduced their anxiety. The study
 recommends the integration of WhatsApp and mobile learning in all stages of education generally and in the field of English language learning/teaching in particular. The researchers recommend that English language teachers should activate mobile learning in English language teaching because of the high positive attitudes shown by the students.

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**References**


Nasr, E., & Mustafa, E. (2018). The impact of YouTube, Skype and WhatsApp in improving...


Barriers to CALL Implementation in Written Expression Courses: EFL Teachers’ Perspectives

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Abstract
This research endeavor seeks to identify the perceived Computer Assisted Language Learning (CALL) obstacles faced by teachers of Written Expression Courses at the level of the department of English, Guelma, Algeria. For that sake and in an attempt to answer our research questions: What are the barriers that hinder EFL written expression teachers from the integration of CALL in their teaching practices? What recommendations can be given to overcome these barriers? Therefore, the quantitative questionnaire was used as a main research tool. It is chosen to elicit the participants’ perceptions, perspectives, and viewpoints. The research sample includes a number of seven participants of those who are teaching or had previously taught this module. The statistical results highlight the conclusion that the respondents’ most reported CALL barriers are extrinsic rather than being intrinsic. They mainly include: English as Foreign Language (EFL) teachers’ resistance to change, lack of technical support, lack of training, and insufficient time in the Written Expression session.

Keywords: CALL, challenges, innovative teaching methodologies, reforms

Cite as: EL AGGOUNE, A., & GHAOUAR, N. (2019). Barriers to CALL Implementation in Written Expression Courses: EFL Teachers’ Perspectives. Arab World English Journal (AWEJ) Special Issue on CALL (5). 299-306
DOI: https://dx.doi.org/10.24093/awej/call5.20
Introduction

Recently, the advent of computer technology along with the growing use of the internet has resulted in inevitable ongoing changes at the level of educational frameworks. Therefore, researchers, scholars, and educational stakeholders have shown an increasing interest for the incorporation of CALL programs at the level of the EFL teaching-learning process. However, the integration of the new technology in the EFL teaching is not without problems. EFL teachers in general and written expression teachers in particular in their way for the innovative integration of CALL in their teaching practices have faced various significant barriers. Therefore, the aim of this article is to identify and uncover what are these barriers and challenges from the perspective of written expression teachers of Guelma University.

1. Literature Review

1.1. Computer Assisted Language Learning (CALL)

Computer Assisted Language Learning (CALL) is often perceived as an approach to language teaching and learning in which the computer is used as an aid to the presentation, reinforcement, and assessment of material going to be learned (Rahimi & Yadollahi, 2011). Levy (1997) has also stated that CALL is more extensively defined as the search for computer application in language teaching and learning. The two terms Computer-Assisted Language Instruction (CALI) and Computer-Assisted Instruction (CAI) were used instead of CALL before the early 1980s (Davies & Higgins, 1982). From the early 1990s, alternative terms such as Technology-Enhanced Language Learning (TELL) has also emerged.

1.2. Computer Assisted Language Learning: A Historical Overview

Warschauer and Healey (1998) have claimed that the history of CALL can be divided into three main phases: behavioristic CALL, communicative CALL, and integrative CALL. The point that has to be stressed is that the development of CALL was parallel to the advances taking place in the field of language teaching in many ways.

To begin with, the behavioristic CALL came into being in the 1960s and the 1970s with the emergence of the Audio-lingual Method of language teaching. At this CALL phase, repetitive drills, and grammar instructions were emphasized (Warschauer & Healey, 1998). Then, Communicative CALL has been introduced in the 1980s. During that period, the behaviorist approaches and theories were rejected then being replaced by the Communicative Language Teaching. Thus, Communicative CALL advocated the use of programs that are based on authentic communications. Subsequently, the Integrative CALL has emerged in the 1990s where the emphasis was given to language use in authentic social contexts. For Warschauer (1996), this phase is “based on two technological developments of the last decade-multimedia computers and the internet” (p.7).

1.3. Barriers to CALL Implementation in Education

The concept “barriers” can be considered as “any condition that makes it difficult to make progress or to achieve an objective” (Schoepp, 2005, p.2). In our case of the present study, barriers are used to refer to all the factors or obstacles that can hinder teachers from the process of the
successful implementation of CALL and Information Communication Technologies (ICTs) in education.

Several authors in the CALL literature have documented for the existence of various classifications regarding the barriers to technologies integration in the educational setting. According to Ertmer (1999), CALL or ICT barriers fall into two main types: first-order (extrinsic) barriers referring to the lack of time, lack of technical support, limited resources, technical problems, and second-order (intrinsic) barriers including attitudes, beliefs, practices and resistance to change. Hendren (2000, as cited in Al-Alwani, 2005) has further asserted that the extrinsic factors are allotted to organizations, while intrinsic barriers are pertaining to teachers in terms of their emotional, personal perspectives. Likewise, Becta (2004) has later on grouped the barriers into: the teacher-level barriers as lack of confidence, lack of teacher competence, resistance to change, and negative attitudes. Whilst, the school level barriers include lack of time, lack of effective training, lack of accessibility to resources, and lack of technical support. In his study, Balanskat et al (2006) has added another division on the basis on whether the barriers are at the teachers’ individual level (micro level barriers) or at the institutional level (meso level barriers). A further taxonomy that is based on material (e.g. insufficient number of computer) and non-material barriers (e.g. teachers’ insufficient knowledge and skills) has been also provided by Pelgrum (2001).

2. Objectives of the Study

The aim of the present research study is to identify and uncover the common CALL implementation obstacles and challenges faced by EFL written expression teachers, and to attempt to find out suggestions and recommendations that can help them overcome hindrances in their CALL-based teaching practices.

3. Research Questions

The present research study attempts at addressing the following research questions:
1. What are the barriers that hinder EFL written expression teachers from the integration of CALL in their teaching practices?
2. What recommendations can be given to overcome these barriers?

4. Research Methodology

For the sake of achieving the objectives and answering the research questions, a type of quantitative research design has been adopted in this study. A questionnaire is chosen to be used as a data collection tool. The rationale behind utilizing this research instrument is because the questionnaire is considered as a popular and most frequent research tool used to elicit information about the informants’ attitudes, perceptions, and opinions (Mackey & Grass, 2005, p.92). In this regard, the questionnaire linked to this inquiry is targeted to account for teachers’ perceptions for the obstacles that hinder them from CALL implementation in their teaching. The questionnaire of the overall number of 19 question items is composed of three main sections. The first is with five questions dealing with teachers' background information. The second is devoted to teachers’ computer use and familiarity, including seven question items within it. Finally, the last section which is composed of seven questions tackles teachers’ perceived barriers to CALL implementation by the adoption of Likert scale.
5. Findings and Discussions
The following section is devoted to the presentation of the results of the study and the analysis and interpretation of its findings.

Table 1: Teachers’ Background Information

<table>
<thead>
<tr>
<th>Items</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Age</td>
<td>- Ranging from 30 to 45 years old</td>
</tr>
<tr>
<td>Q2. Teachers’ Qualification</td>
<td>- ALL of them with MA degree</td>
</tr>
<tr>
<td>Q3. Teaching Experience</td>
<td>- Ranging from 5 to 10 years</td>
</tr>
<tr>
<td>Q4. Modules being taught</td>
<td>- Written Expression, Grammar, Civilization, Testing and Evaluation, Literature, Research Methodology</td>
</tr>
<tr>
<td>Q5. Teaching Experience of Written Expression Module</td>
<td>- Ranging from 2 to 8 years</td>
</tr>
</tbody>
</table>

As it is displayed in the previous table 1, the results dealing with teachers’ background information or personal profile indicate that the respondents’ age ranges between 30 to 45 years old. As far as the teaching qualification is concerned, all of the informants admit that they have already been post-graduated with an MA degree and most of them are inscribed for a PhD qualification. This implies that the sample teachers hold adequate academic degree that meets their position requirements. The data also shows that the respondents have been working from five to 10 years teaching at department of English in general and from two to eight years teaching Written Expression module in particular. In addition to many other modules that have been assigned for them such as: Grammar, Civilization, Testing and Evaluation, Literature, Research Methodology. This finding is also representative in a way that it reflects that the teaching staff members have a rich and varied professional teaching experience. The other assumption that might be suggested is that written expression module seemingly appears to be undertaken by the same group of teachers because of the heavy experience that some have held.

Table 2: Teachers’ CALL Ownership

<table>
<thead>
<tr>
<th>Question Item</th>
<th>a) Yes</th>
<th>b) No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6. Do you have a personal computer?</td>
<td>100%</td>
<td>00%</td>
</tr>
<tr>
<td>Q7. How long have you been using computer devices?</td>
<td>8, 12, 13, 15, and 20 years</td>
<td></td>
</tr>
</tbody>
</table>

When being asked about the computer ownership and for how much time it has been used. In response and as it was expected, all teachers admit that they do use it since from eight to 20 years. Results for both questions (Q6 and Q7) reveal that the sample under study have been using computer device for a potentially very long period of time and this reflects its ease of access, and widespread of use in the era of technology explosion.

Table 3: Teachers’ Computer Skills

<table>
<thead>
<tr>
<th>Question Item</th>
<th>a) Poor</th>
<th>b) Moderate</th>
<th>c) Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8. How do you evaluate your computer skills?</td>
<td>00%</td>
<td>71.4%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>
As presented in table 3, the participants are also requested to denote the level at which they can classify or evaluate their overall computer skills or computer literacy. Items are presented on a proposed scale containing three options. Surprisingly, no participant has opted for the first option and rated himself as being “poor”. The overwhelming majority (71.4%) has rated themselves with a “moderate” level; whereas, only 2 respondents with a significant percentage of 28.5% have pointed out to their computer literacy level as being “advanced”. This signifies the fact that the target teachers do possess a relatively acceptable level of technological skills and computer knowledge and this significant piece of information shows a considerable divergence with what has been previously stated in the literature review i.e. teachers’ lack of computer literacy.

Table 4: *Frequency of CALL Use in Different Contexts*

<table>
<thead>
<tr>
<th>Question Items</th>
<th>a) Always</th>
<th>b) Sometimes</th>
<th>c) Rarely</th>
<th>d) Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9. How often do you use the computer for educational purposes outside classroom?</td>
<td>71.4%</td>
<td>28.5%</td>
<td>00%</td>
<td>00%</td>
</tr>
<tr>
<td>Q11. How often do you use the computer for educational purposes inside classroom?</td>
<td>00%</td>
<td>42.8%</td>
<td>42.8%</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

Both question items (Q9, Q11) aim to make a sort of comparison between the frequency of computer use to achieve educational purposes at the level of two different contexts or environments i.e. inside the educational classroom and outside it. The obtained responses represented in table 4 indicate that more than half of the informants (71.4%) declared that they always use the computer to serve their academic needs outside the classrooms. Similarly, 28.5% of them have stated that they sometimes do for the same purposes and by keeping the same context. Notably, none of them have opted for “rarely” or “never” options.

When shifting the context to utilizing the computer as a pedagogical aid within the classroom, a sort of variation arises: 14.2 % have responded by “never”, 42.8% is an identical percentage for the couple of choices “sometimes”, and “rarely”. Abruptly, none of them has ticked the “always” option. Hence, this implies that the computer as an educational tool does not sound as a threatening issue for teachers because to a certain extent they have desire, readiness, and willingness to incorporate it in their teaching practices; however, it tends to be less frequently used within the educational setting than outside it. This kind of comparison of frequency of use results in an emerging sort of contradiction that might be attributed to existence of a number of factors that might have hindered written expression teachers from CALL implementation in their EFL classrooms. This tendency is going to be further investigated within the follow-up questions of the next section.

Table 5: *Reasons for Using CALL inside and outside Classroom*

<table>
<thead>
<tr>
<th>Question Items</th>
<th>Reasons for using CALL for educational purposes inside class</th>
<th>Reasons for using CALL for educational purposes outside class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q10. Reasons for using CALL for educational purposes outside class</td>
<td>Course preparation, supervision purposes, PhD research, and email communication</td>
<td></td>
</tr>
<tr>
<td>Q12. Reasons for using CALL for educational purposes inside class</td>
<td>Lesson presentation through data-show, checking electronic dictionary, using videos</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 serves to state the reasons for which university written expression teachers use CALL as a supplement for their teaching practices. Among the reasons they mentioned are: lesson
presentation through data-show, checking electronic dictionary, and using videos at the level of the educational classroom. On the other hand, Course preparation, supervision purposes, PhD research, and email communication outside it. In this regard, it can be assumed that our sample teachers are aware of the significant importance and the potential role that CALL can play in their teaching process.

Table 6: CALL Implementation Barriers

<table>
<thead>
<tr>
<th>Barriers to Computer technology Implementation</th>
<th>Agree</th>
<th>Neuteral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13. Teachers’ Lack of computer knowledge and skills</td>
<td>28.5%</td>
<td>00%</td>
<td>71.4%</td>
</tr>
<tr>
<td>Q14. Teachers might feel uncofident and anxious on how to use new technologies</td>
<td>28.5%</td>
<td>00%</td>
<td>71.4%</td>
</tr>
<tr>
<td>Q15. Most teachers still stick to traditional teaching and refuse to adopt to new changes</td>
<td>100%</td>
<td>00%</td>
<td>00%</td>
</tr>
<tr>
<td>Q16. Teachers’ negative attitudes towards the implementation of computer technology in their teaching</td>
<td>42.8%</td>
<td>28.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Q17. Insufficient time during the lesson</td>
<td>57.1%</td>
<td>00%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Q18. Lack of technical support and unavailability of technological devices</td>
<td>85.7%</td>
<td>14.2%</td>
<td>00%</td>
</tr>
<tr>
<td>Q19. Lack of teachers’ effective training programs</td>
<td>57.1%</td>
<td>14.2%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>

The obtained results that are shown in table 6 reflect the distribution of the barriers of EFL written expression teachers to CALL Integration. At the first place comes teachers’ resistance to change (100%). Seemingly, all participants do agree upon it as being a key obstacle. The second highest percentage of agreement (85.7%) is given for the lack of technological devices. Thereafter, it comes the percentage 57.1% which is representative for a couple of barriers namely: insufficient time in written expression course and lack of training. All the above mentioned CALL hindrances have been opted for by more than half of the respondents. However, the least chosen barriers from the point of view of less than half of the surveyed teachers are: teachers’ lack of computer skills, teachers’ negative attitudes, and lack of confidence. They have been respectively represented by these percentages of agreement: 28.5%, 42.8%, and again 28.5%. Therefore, this can be interpreted by the fact that almost all the faced barriers are the result of extrinsic rather than intrinsic factors. That is to say that they are classified as school-level barriers which are to a large extent out of teachers’ control instead of being teachers’-level barriers.

Conclusion

Through its statistical findings, the present article concludes that an increasing number of EFL Written Expression teachers are familiar with CALL usage, have a notable access to computer technologies, and a good command of digital skills. However, they still consider CALL-based teaching as a challenging matter because they are confronted with many obstacles and barriers. The ones that are deemed to be more bothersome and most challenging for our sample are: EFL
teachers’ resistance to change, lack of technical support, lack of training, and insufficient time in the Written Expression session. Therefore, this particular context calls for taking initiatives for educational implications and pedagogical reforms.

In order to overcome the aforementioned barriers and for the sake of realizing an effective CALL implementation for EFL teaching in general and the writing courses in particular, a number of implications have been suggested to be put into practice. They can be summed up as follows:

1. Attempting to provide sufficient CALL-based materials by the different universities and institutions.
2. Effective training on how to integrate CALL in the educational setting for both teachers and students.
3. Teachers should be more confident and flexible with the innovative teaching methodologies i.e. not to be reluctant to supplement their face-to-face sessions with a certain level of online-based instruction.
4. Teachers should be more organized in their time management skills to succeed in introducing technological aids within their classroom lectures.

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References


**Appendix: Teachers’ Questionnaire**

**Section One: General Information**
1. Your age: ........................
2. What is your highest qualification? a) MA □ b) PhD □ Others……
3. How long have you been teaching at the university? ..........years
4. The Modules you are currently teaching ..................................................
5. For how long have you been teaching written expression? ............years

**Section Two: Computer Use and Familiarity**
6. Do you have a personal computer? a)Yes □ b) No □
7. How long have you been using computer devices? ...............years
8. How do you evaluate your computer skills? a) Poor □ b) Moderate □ c) Advanced □
9. How often do you use the computer for educational purposes outside classroom? a) Always □ b) Sometimes □ c) Rarely □ d) Never □
10. Specify for which purposes?
........................................................................................................................................
........................................................................................................................................

11. How often do you use the computer for educational purposes inside classroom? a) Always □ b) Sometimes □ c) Rarely □ d) Never □
12. Specify for which purposes?
........................................................................................................................................
........................................................................................................................................

**Section Three: Implementation Barriers**
Please indicate to what extent do you agree with each of the following statements:

<table>
<thead>
<tr>
<th>Barriers to Computer technology Implementation</th>
<th>Agree</th>
<th>Neuteral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Teachers’ Lack of computer knowledge and skills</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14. Teachers might feel uncofident and anxious on how to use new technologies</td>
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<tr>
<td>15. Most teachers still stick to traditional teaching and refuse to adopt to new changes</td>
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<tr>
<td>16. Teachers’ negative attitudes towards the implementation of computer technology in their teaching</td>
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<tr>
<td>17. Insufficient time during the lesson</td>
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</tr>
<tr>
<td><strong>18.</strong> Lack of technical support and unavailability of technological devices</td>
<td></td>
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<tr>
<td><strong>19.</strong> Lack of teachers’ effective training programs</td>
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</tr>
</tbody>
</table>

Thank you
EFL Teachers as Designers of Ubiquitous Learning Experiences

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Abstract
Ubiquitous learning, also known as U-learning, refers to the learner’s ability to learn at any place at any time. This paper argues that U-learning represents a new perspective in terms of pedagogy. The main contributor to this process is foremost the teacher, who has to adhere to the ever-changing language learning/teaching scenery. This study aims at setting the fundamentals of materials development at the intersection of two major areas of contemporary education, namely the needs of the ‘net generation’ students and the educational potential of the evolving social web and digital technology. It seeks to answer the following questions: What is digital technology and how does it lead to U-learning? What is web 2.0 and how does it affect classroom pedagogy, practice, and the design of quality teaching/learning materials? How does it help teachers improve their practice and materials development procedures? And how can teachers transform today’s innovative technology into ubiquitous learning experiences, promoting learner autonomy, regardless of any geographical or institutional boundaries? We will illustrate the whole procedure with a framework for web 2.0 integration that identifies the crucial features underpinning the extramural, ubiquitous learning experiences, in which learners can engage.

Keywords: experiential tasks, materials development, ubiquitous knowledge building, ubiquitous learning, web 2.0

DOI: https://dx.doi.org/10.24093/awej/call5.21
Introduction
The vast use of digital technology and the internet has dramatically changed the educational landscape throughout the world. There has been a strong drive towards the significant impact that digital technology can bring to the language classroom in the context of the 21st-century education. The latest profit to language teaching is the new teaching/learning modalities and the network open, collaborative learning space that the hypermedia participatory nature of the second web (web 2.0) applications provide. This network-based environment has expanded the learner’s opportunities for engagement, communication, self-directed and ubiquitous learning, where shared content and resources are at hand with a few clicks of a mouse in a way that promotes collaborative learning. Considerable studies (e.g., McLaughlin & Lee, 2010; Glassman & Kang, 2010) support the positive impact that such technologies can bring to instruction and learning, by broadening the learner’s horizons beyond the walls of the classroom, allowing them to explore and discover their learning paths, while they can bridge learning and instruction spaces across school, home, and the wider community. As a result, technology literacy and incorporation to support classroom learning became major concerns to most institutions and teachers alike. Nevertheless, most initiatives in this respect were technology-driven, and much has been the focus on technology accordance and literacy; little consideration, if any, has been given to the pedagogical aspects of the teaching/learning process.

This paper aspires to divert attention to that educational aspect of the technological endeavor yet extensively neglected; namely the pedagogical element of the instructional act. It aims at setting the fundamentals of materials development by English language teachers at the intersection of two significant areas of contemporary education. The most critical of these is the practical demands of the subject matter and the needs of the ‘net generation’ students. The second is the educational potential of the evolving social Web and digital technology, incarnating the socio-cultural factors involved in modern learning. It commences by addressing the theoretical foundations of Web 2.0 pedagogy, and then, sheds light on the essential contributions that it can bring to the language classroom and materials development. The paper shifts focus, after that, to the teachers and learners’ changing roles in light of these new modalities. At the end of the paper, we will give some suggestions on how to exploit this knowledge to create task-based ubiquitous learning experiences for students.

Ubiquitous Language Learning
With the rapid development of information technology, ubiquitous computing devices (e.g., mobiles, IPods, Laptops, etc.) and their global interconnection via the internet has permeated almost every aspect of our life including learning. These have a different cultural and epistemic logic from the old drilling practice and stimulus-response patterns ensured by cassettes, microphones, and headphones mostly used in language laboratories in the previous decades. Eventually, the linear presentation of materials has been displaced by “authentic multimodal content, simultaneous interactions for everyone, and more responsive feedback and assessment systems” (Kalantis & Cope, 2015), bringing within ample opportunities for a corresponding ‘new learning’.

The concept of ubiquitous learning has gradually emerged over the years to become one of the critical terms of the 21st-century education. It indicates an extension of previous learning
paradigms (traditional learning and e-learning), and represents a new approach to learning with a new delivery model for activities that transcend the physical confines of the classroom via the use of ubiquitous computing devices. In that sense, ubiquity sketches the opportunity for learning to take place everywhere and heralds higher chances for more varied, inspiring and learner-centered experiences. One major methodological challenge for instructors, then, is to fully harness these technologies to engage learners not only as informants but also as creators of the information used to study their learning styles. According to Stanly (2013)

The proliferation of hand-held devices, such as mobile phones, digital cameras, tablets, mp3 players and voice recorders, has led to what, for some teachers, is sometimes a bewildering choice of potential activities and resources. The use of mobile devices is expected to lead to language learning becoming more informal and personal (...). This revolution in mobile learning is happening both inside and outside the classroom. (p.3)

As such, these networked digital devices brought with them the promise of exciting new venues for language learners. They are seen to involve them in more interactive learning scenarios that have significant potential to change language-learning practices in and outside the classroom.

**Pedagogy 2.0**

In the landscape of these technologies, the internet has evolved from a source of information, within web 1.0, into “a network of virtual spaces built on the dynamics of social communities” (Sturn, Kennel, Mcbride, & Kelly, 2009, p. 370), bringing within new pedagogical openings that magnified their effect in English as a Foreign Language (EFL) settings. This new generation of the World Wide Web has come to be known as web 2.0, interchangeably named social web; embracing interactive, social and collaborative features that can fuel new types of learning experiences through new task types. These significantly new social affordances have opened new interactive web spaces for learners, where user-generated content, peer dialogue, and co-construction of knowledge are key components of a newly emerging learning paradigm. Under which, the learner is at the foreground, and acts as a creator rather than just a receiver while the teacher steps into the background and fulfills his role as guide, coach, and facilitator. Within this scope, Conole (2007) states that three fundamental shifts in technology-enhanced learning have emerged because of the web 2.0 technological revolution. These include:

- A change from a focus on content to communication
- A change from a passive to a more interactive engagement of students in the educational process
- A change from a focus on individual learners to more socially-situated learning

This noticeable swing of the pendulum in English Language Teaching (ELT) methodology learning has given shape for a new networked, collaborative and interactive method of learning known as ‘Pedagogy 2.0’. The concept of Pedagogy 2.0 signifies a distinct step-change in language learning methodology, from teacher-centered didactic pedagogy, where learners are consumers of content created for them, to a more learner-centered one that encourages learner’s voice and production ensured by technology. In addition to learner’s empowerment, interactivity, and collaboration; web 2.0 serves as an open environment for learners to explore and practice their
skills, an inventory of a wide array of multimodal content originating from a variety of authentic resources, and a means for more responsive assessment and feedback systems. Podcasting and vodcasting tools allow learners to move beyond handwriting and will enable them to represent their meanings independently and simultaneously in different modes through creating their audio or video productions at no cost. Blogs, Facebook, and Youtube sites have opened classroom walls and served as platforms where learners can display their works to the outside world, thus creating small learning communities. As such, language learning becomes fun and incredibly motivating.

In this vein, web 2.0 technologies inherently echo core aspects of learner-centered approaches that are more in line with recent social constructivist theorizing and learners’ need to create meaning; deeply rooted in the socio-cultural theory. With the social constructivist perspective, social interaction has become the first and most significant contributor to learning, and learning is a process of interpretation and meaning-making. On par with, Sturn et al. (2009, p.371) see “earning as a social dialectic process of meaning” that moves the locus of knowledge from the teacher to the learner and decentralizes the learning and teaching concepts; reshaping the teacher, the learner, and the materials in light of these emerging web technologies.

The Material
As the Internet makes its way into the hands of teachers, the daunting task of providing comprehensible input to their learners has become more comfortable. It has produced a myriad of authentic materials, and tremendous search capabilities that allow instant access to up-to-the-minute information, on a variety of topics; from which they can select those most appropriate to fuel classroom discussions when exposing their learners to real-life tasks. It is also useful for those willing to mount their pedagogical material online both as a support for its creation and a means for content preparation.

This bounteous harvest of materials, that the internet provides, assists in the development of authentic material (both computer-based or not) since the actual use of the language and the correlation of different types of resources that echo those learners apply in everyday life are the basis of the selection of content. According to Bell (2005), cultural richness and reflection of real-life complexities, associated with authentic materials, seem to be undermining any potential demotivating backwash effects. Most said, online materials are culturally more abundant, have the potential to echo real-life complexities and, hence, they are more productive, understandable, meaningful, and more attractive to learners compared to conventional content. Yet, with this plethora of material on the net, the problem seems to be one of selection of appropriate materials, to weed out those poor in quality and linguistically inappropriate, thereby “allow a more thorough integration of language, content and culture than ever before and provide students with unprecedented opportunities for autonomous learning” (Warschauer & Meskill, 2000, p.13).

In addition to the primordial role of internet technology as resource retrieval, multimodality and non-linear structure of information have brought interactivity and dynamism to the materials as well as to the teaching/learning environment. The old linear, static nature of materials has been replaced by hypermedia; different modes of representation (aural, written, visual, audio, and dataset) juxtaposed together in digital media, offering new types of activities and more learner engagement. Accordingly, web 2.0, allows learning content, aggregated from different sources
using various tools, to be presented non-linearly in a text, graphical, audio, and video formats, in one place, on a digital device. This non-linearity will breathe new life into the most static material and increase comprehensibility through learner control, and multimedia annotations.

Along with this, the interactive, social, and collaborative features of web 2.0 technologies are seen to be also inflicting their full impact on the ideas, topics and experiences that can be explored using digital technologies, and, hence, promoting new activity types and tasks hardly realised using other materials (Reinders & White, 2010). Multimedia annotations, video tutorials, communication, and assessment tools can increase the array of learning scenarios, in which learners engage. They offer open realistic contexts, not confined to classrooms, to generate and develop suitable activities/tasks that create opportunities to work smoothly across boundaries with others with different cultures, values, and interests. A case in point is telecollaboration tasks designed and channelled through synchronous web 2.0 communication technologies that were shown to mitigate attrition rates of students, contribute to students feeling a sense of communal belonging and engagement that result in intercultural exchanges and understanding unattainable with traditional methods. Moreover, these attributes include a novelty of features, which allow students to have a go with experimenting with the language in new and original ways that reflect their real-life needs. In light of this, experience provides the basis for activities, readiness to learn is ensured via topics most relevant to learner’s job or personal life, and learning is problem-based rather than content-oriented. Many of these tasks can culminate with student-developed output based on the objectives of the lesson and, or the activity at hand.

The social participatory nature of web 2.0 has initiated an ‘authoring revolution’ that allows teachers and learners alike become content creators, thereby subverting the vertical top-down development of materials and opening out increased opportunities for the bottom-up and horizontal development frameworks. To this end, “ownership, autonomy, and contextualization will be core features of materials and materials-rich pedagogies” (Banegas, 2013, p. 12). This can enhance the quality of materials development and opens up new avenues of formative feedback to instructors and fertile environments for student’s self-directed learning processes and strategy use, where the locus of knowledge creation, distribution, and discussion became a shared commodity between the instructor and students that can take place inside and outside the classroom. Accordingly, ubiquitous learning, with varying degrees of constraints (e.g., access to the internet), represents a new dimension of learning promoted by and through materials and tasks.

The Teacher
Above, we have already discussed the change in the traditional classroom hierarchy. As the learners gained more voice and responsibility, the lines that once demarcate traditional student/teacher roles blurred, subverting the supremacy of the teacher as the primary fountain of knowledge. The result of such a change is a more balanced relationship, where students are no longer empty vessels to be filled with knowledge but rather active producers of content. The instructor then moves away from the classroom’s limelight, leaving the center-stage for the new protagonist, ‘the learner.’

This shift from the teacher-centered classroom to the learner-centered one has its bearing on the teachers’ role. Within this paradigm shift of the process of learning, they act as guides,
facilitators, negotiators of content and operation, and encouragers of learner self-expression and autonomy. Behind this role change, looms the broader issue of technology integration and teacher responsibility. Sawhill (2008, last para) claims that “our emerging role as teachers and technologists in the 21st century is to prepare ourselves, our colleagues, our schools and our classrooms for the linguistic and cultural realities of the teaching in a world where everyone and everything is connected, or ‘intertwined’.” We suspect technology on its own is not a magic wound, nor marvelous are its affordances for themselves. Students, more often than not, get excited with the wow and apprehension surrounding new technologies at the expense of their learning, which leads to a bleak effect on their learning and development. To overcome this gap between the promising potential of these technologies and learners’ actual practice, teachers need to help them make the most out of using them; the issue is how to promote and support this use. For this end, the teacher is in front of the additional roles of designer, integrator, organizer, and coordinator within this learner-centered environment.

As a designer, the instructor has to articulate a plan for technology uptake that aligns learner characteristics, content, pedagogy, and technology to develop tasks and activities for engaging in this participatory digital landscape, where students are a real part of a relevant community of users. Per se, any effective use of technology is mainly dependent on the methodological approach underpinning its application (Qashoa, 2013). For instance, in an intercultural goal-oriented telecollaboration exchange task, the teacher has to set goals, objectives, decide on the contact tool (e.g., video conferencing via Skype), and make contact with possible partner classes through online exchange networks. This way, benefit, and relevant engagement are only possible if he provides structure for most web 2.0-supported initiatives, activities, and tasks.

Despite the evident promising mix of web 2.0 affordances, their integration is another kettle of fish. Teachers should have a clear vision for infiltrating web 2.0 tools-based activities and tasks into their curriculum, to ensure an agile integration approach, where they are an integral part of classroom practices and a severe part of the learning process. As Joseph Shed (Education Exchange, 2004) puts it “the point is not to show that you can dazzle people with lots of digital wizardries. It is to show that you can use technology in thoughtful, well-planned ways to promote more effective learning” (p.3 ). Again, the teacher is called to act as ‘expert’ who provides explicit guidance for learners to fully harness the benefits of the unlimited panorama of linguistics and cultural information in developing their communication skills, through supporting their learning processes, and increasing language learning opportunities in and outside the classroom. Therefore, the payoff of enriching classroom materials with Computer Assisted Language Learning (CALL) materials (online dictionaries, videos, podcasts, etc.), or integrating interaction exchange sessions (e.g., emails, Skype, video conferencing) in ELT classes, in terms of academic achievements, interest, motivation, and educational transforming results, is excellent.

In truth, successful integration of web 2.0 activities is dependent on several interconnected factors, the most important of which are teachers’ readiness and willingness to take risks. This still requires a substantial investment of time and effort. Some hindrances may emerge along the way, and cause frustration and undesirable results, such as hardware and software playing up, dependence on computer lab schedules, etc. In the case of telecollaboration, obstacles range from time constraints if the two classes are from different time zones, student absences, demotivation,
etc. To surmount this, teachers need to set smooth well-planned steps to guarantee gradual progress from extension activities/tasks directly linked to classroom immediate needs and practices towards more ambitious future actions.

All too often, within the decentralization of authority in the learner-centered classroom, the univocal transmission of knowledge has been replaced by recursive participation that values learners’ voice and own operations. Even so, this does not signify a passive role for teachers. On the contrary, digitization (including the internet) has further burdened teachers with new pedagogic tasks such as planning, coordinating, improving learning strategies, and leveraging students’ metalinguistic awareness of CALL genres (Warschauer, 1996). For this end, this often entails reconsidering teaching practices and may even call for training to cultivate the necessary skills to gear up with technological advances, to cater to the various changing needs of their learners.

The Learner
Continuing to examine the impact of web 2.0 technologies and the changed context of English language learning, one can notice a significant role change for learners; surpassing their ability to consume information to creating it. This fact necessitates a decentralization of the teaching/learning concepts, providing higher chances for increased bottom-up control and horizontal learning contexts, where the learner is a negociator of learning content and modes of learning, more responsible of his studies, and has the opportunity to develop his learning strategies and study skills. This way, the more students do for themselves, the more they will learn.

One significant advantage that web 2.0 tools have blessed English as a foreign language (EFL) learners with is time, as they provide extra opportunities to engage in meaningful language learning tasks all after the school has closed down for the day. Learners utilize these tools in diverse contexts. An example of such uses include blogging that permits the learners to develop, create, and share their work online wherever they are, at any time; they discuss, negotiate meaning, and get feedback from a worldwide audience all while ‘just browsing the net.’ This way, they become more vigorous, more creative, and more autonomous.

The increased importance of online communication through these collaborative dialogical platforms is also contributing to new, safer and anonymous English practice spaces. Through which, reticent, shy, and uncomfortable students in ‘on the spot’ class discussions can develop self-confidence in their English communication abilities, thus maximizing their participation and engagement rates. Learners’ inhibition decreases especially when they are in control of their learning once given a chance to produce their works in a controlled setting (Ramirez, 2010). The setting up of a video or audio file will allow learners to practice and polish their work until they are satisfied with the final product. They also provide a means of getting feedback in an error forgiving environment wherein students express a keenness to practice the language and collaborate with other peers in cyberspaces.

By virtue of its user-centric nature and focus upon active engagement of learners, web 2.0 supports the development of their problem-solving skills since they are required not just to find information but to judge its efficacy as well. Besides, its open features that focus on the user and collaborative content generation, through peer review and communal feedback, has increased
creativity and led to the evolution of collective intelligence within learning groups (Jimoyiannis op. cit, Ramirez, op.cit); intensifying the legacy processes of knowledge production. There is, thus, a strong emphasis on the traces of knowledge production processes which are as important as the final product. For instance, the setting up of a wiki will allow learners to look for appropriate sources, get peer feedback during the making, and produce collaboratively created works.

One pivotal pedagogical advantage that is often underestimated is that social networks are fun! A considerable base of research espouses the positive link between technology and learners’ motivation, learning styles, and, or improvement in specific skill areas. It has been found that web 2.0 tools use in the classroom increases learners’ motivation (Goodwin-Jones, 2005), raises their interest (Stanley, 2006), and caters for multiple learning styles since the material is presented in different formats (text, graphical, audio, and video); all at the same time on the same digital device. Related to this, Svedkauskaite, Reza-Hernandez, & Clifford (2003, “Frameworks for Successful LEP Learners” section) have also found that:

Technology has evolved from its support function to play a role in initiating learning processes. It can provide a flexible learning environment where students can explore and be engaged. Hypermedia, for example, individually addresses levels of fluency, content knowledge, student motivation, and interest, allowing the inclusion of LEP [limited English proficient] students, who can thus monitor their comprehension, language production, and behavior. (para 4)

Additionally, the projected inherent features of web 2.0 have a profound impact on students’ cultural awareness. Mostly because of the increased and easy contact with their worldwide online partners, there will be an open window-channel to discuss and reflect on their own as well as others’ cultures. Within these intercultural exchanges, students will have the chance to look at how others look at their culture, can themselves expand and refine their views of others’ cultures, and reflect on and criticize some aspects of these cultures. The juxtaposition of these different views illustrates how students’ concepts and their cultural and intercultural awareness are evolving and will change in the future.

All in all, Web 2.0 ubiquity, its various services, and its penetrating in the social, economic, and cultural life have a noticeable observable impact on today’s learners and their needs. Seeing that they hold great potential to benefit language learning/teaching through multiple means, the demand to cultivate these benefits has increased proportionately, which implies a fresh look at ‘what students learn,’ ‘how they learn,’ and ‘where and with whom they learn.’

Towards a Ubiquitous Learning Experience
As has been discussed, digitization (including web 2.0) provide a ripe context for the emergence of experience as an essential factor in active knowledge-making. It endows language learners with new challenges and opportunities to tackle a wide range of human experience when used as a tool for inquiry, communication, and construction. This way, they facilitate a pedagogical movement away from vicarious experiences presented through old drill and practice media and materials; allowing them to learn by doing things themselves. Within this scope, non-linearity of information,
active knowledge creation, negotiation of content, and what to explore, all contribute to developing more flexible thinking skills among learners.

In this vein, experience (including mistakes) can provide the basis for most learning activities/tasks, and what we really need to do, as teachers, is to expand our vision of the learning process “from what technology can do for the student to what the student can do with technology” (Godwin-Jones 1999, p. 49). Hence, teachers should be actively involved in empowering students in that direction through a clear vision of the possible extramural activities that they can undertake along with ways to assist and assess the learning that could evolve out of this endeavor by the learners. Like so, with well-planned learning tasks, we can help ensure that any technological uptake can be met hassle-free. Surely the primary intention is not to limit students’ web 2.0 use, but rather to leverage this use from a simple technological asset to become a learning platform to accelerate language acquisition.

Learning by experience is seen as one of the most fundamental means of learning. It approaches learners as active knowledge constructors who link action, reflection, and transfer of knowledge and experience. To use Kolb’s (1984, p. 41) words “[learning] is the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” and equally important from the reflective practice (individual and/or collective) of that process. Following this line of thought, Silberman (2007) advocates that experiential learning refers to:

(a) The involvement of learners in concrete activities that enable them to experience what they are learning about and (b) the opportunity to reflect on those activities. Experiential learning can be based on both real work/life experiences (e.g., working on a current project) and structured experiences that stimulate or approximate real work/life. (p. 7)

This way, it is a learner-centered approach driven by action, reflection, and transfer of knowledge and experience.

It has been pointed out earlier in this paper that digitization (including the internet) provide experiential tools combined with a web 2.0 ubiquitous setting that support more interaction, engagement, knowledge creation and participation among EFL learners. Accordingly, web 2.0 ubiquitous learning tasks can improve experiential learning scenarios, in which learners may partake. This is a tremendous asset for EFL acquisition as it would encourage ubiquitous knowledge building under the design of web 2.0 interactive, collaborative tasks that are more often supported by the experiential tools and materials that digitization affords.

Towards achieving a ubiquitous learning experience for learners, some of factors are evident:

- The importance of demonstrating the added value of Web 2.0 as a learning platform rather than a tool to support learning
- The need to understand and take account of the experiential tools that web 2.0 provides
- The complexity of the relationship between pedagogical changes and their impact on teacher’s practice
• Recognition that the characteristics of web 2.0 tools align well with the perceived wisdom of “good pedagogy” (inquiry-based learning, project-based learning, ubiquitous learning, dialogic and collaborative learning, constructivism and active engagement), and, hence, experience and ubiquity need to be the cornerstone of any design perspectives.

Figure 1 outlines a framework for web 2.0 integration, which captures these factors. It demonstrates how effective its implementation can only be achieved if three interrelated aspects; namely design, pedagogy, and practice, are considered in conjunction. Each element informs the other two, and vice versa. So, pedagogy 2.0 principles and opportunities should be used as guidance to inform design and influence practice. Practice (be it student- or teacher directed along with their perspectives, changing roles, and responsibilities should also inform design, but also help to guide future pedagogical considerations (both inside and outside the classroom). Design also has its bearing on both pedagogy and practice.

In summary, the following crucial features underpin the extramural, ubiquitous learning experiences resulting from the proposed framework:

**Learner validity:** it makes use of activities and tools that learners usually employ in their everyday lives, which reflects their needs and interests, and involves them in using technologies in ways that reflect their out-of-class practices.

**Collaborative and autonomous learning:** it allows students to develop collaborative skills through collaborative feedback and content generation leading to collective intelligence. It also helps in the development of the skills needed for autonomous learning by guiding them to recognize their role in managing their learning.

**Multimodality:** students have the chance to not only make use of authentic multimodal input but also creating it.
Reflection: Reflecting on their learning process lets students identify the tasks and tools that they prefer when learning, which has a direct impact on their motivation and, hence, success. Ubiquitous knowledge building: the extramural activities, in which students engage, allow for flexibility and convenience of learning so that learners have control over their place, mode, and manner of learning.

Conclusion
The purpose of this paper was to drive attention to the impact of web 2.0 technologies on materials and task design and the teaching/learning process. It is designed to initiate discussion rather than be the final word in it. The paper tries to reveal the way web 2.0 is crucial and how it affects teachers, learners, and materials. It argues that teachers can transform their attributes into practical ubiquitous learning experiences for learners when used as an effective learning space to be exploited in instructional practices. To this end, we have presented a framework aiming to support learner’s web 2.0 experience and teachers’ control and guidance over out-of-classroom practices. The paper ends with three main conclusions. First, it is important to look at web 2.0 as an open, ubiquitous learning platform that goes well beyond the simple use of technology as an instructional asset. It is imperative for teachers to support learners’ initiatives with web 2.0 through promoting transformational interactive EFL learning environments that comprise reflection, ubiquitous knowledge building and experiential tools (materials) so that students engage in active learning scenarios. Finally, to realise the former two, it is important to look beyond the classroom itself.

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The Impact of Digital Storytelling on ESL Narrative Writing Skill

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Abstract
This paper presents a part of a study on the teaching of narrative writing by incorporating Digital Storytelling. Writing skill is an essential component in mastering English because it incorporates all elements in English. By integrating technology in the learning process, students would be able to improve their writing skill. In Malaysia, students’ performance in examination has declined in recent years since the marks are based mostly on students’ writing. This research aims to know the impact of Digital Storytelling towards Malaysian secondary school students by investigating its impact on content, grammar, vocabulary and overall performance. It also explores students' perception of Digital Storytelling. This quasi-experimental study involved 52 Form four students from a fully-residential school in Melaka who were chosen using convenient sampling as part of the controlled and experimental groups. Data were collected from pre-tests, post-tests and a semi-structured interview. The quantitative data were analyzed using mean analysis, Wilcoxon Signed Tank Test and Independent t-Test while qualitative data were analyzed using thematic analysis. Findings show that there is a significant difference in the score before and after the intervention but there is no significant difference between the score of the experimental group and the controlled group. Participants stated that DS motivates them to write and improves their writing. It is hoped that this study would provide an alternative to teaching narrative writing and adds to the current pool of literature. It is suggested for future researchers to conduct purposive sampling which could yield different results.

Keywords: digital storytelling, education, ESL, narrative writing skills, technology

Introduction

One of the key subjects under 21st Century Learning (21CL) is the English language. Students are required to master all English language skills namely listening, speaking, reading and writing. While all skills are important, writing is considered as the most crucial skill. As writing is interrelated with other three skills i.e. listening, speaking and reading, indirectly it helps to improve those skills (Saed & Al-Omari, 2014). Other than that, Maghsoudi and Haririan (2013), mention that writing provokes thinking, makes students concentrate and manage ideas, and nurtures their summarizing, analyzing and criticizing ability. One genre of writing is narrative writing. It serves to inform function, report events that happened or tell stories (Abdel-Hack & Ahmed Helwa, 2014). Students encounter several challenges during the process of writing such as making grammatical errors and producing better content (Teo, 2006). The question is, how to improve narrative writing skill? Abdel-Hack and Ahmed Helwa (2014) suggested that teachers should incorporate the use of Digital Storytelling (DS) in the learning and teaching process. With the emergence of Web 2.0, there are numerous tools on the Internet such as DS that can enhance students’ narrative writing skills. Reinders (2011) explains it as the use of text, audio, music, videos and photos to form a digital story. Garrard (2011), as cited by Siti Mariam et al. (2016), assert that there is absence of academic researches that prove DS can increase the standards of literacy in writing.

Chung and Melor (2016) point out that the level of proficiency of Malaysian students is far from satisfactory although they had learned English in school for 11 to 13 years. This can be proven by students’ achievement in the Malaysian Certificate of Education (SPM) examination. In SPM 2017, the grade point average (GPA) for English was 5.84 with the percentage of failures was 20.1%. From the total number of candidates in 2017, which was 412,308 students, 82,874 of them failed English subject. In the following year, the GPA was 5.98 (Lembaga Peperiksaan Malaysia, 2018) with the failure rate of 20.6%. The number of failures for English subject for SPM 2018 was 80,113 students from a total 388, 899 students. The high number of failures could be due to the format of the English paper itself. SPM English paper is divided into two papers. The first one is essay writing and in paper 2, there are questions on summary writing and answering the literature question on the novel they have learnt before. Overall, the students need to answer written tasks with a total mark of 115 out of 155 or 76% of the total mark. Hence, writing is a very important skill for Malaysian English as a second language (ESL) secondary school students. If they could not be proficient in that skill, it would lead to poor performance in their SPM results. From the statistics mentioned earlier, it implies that ESL students are not competent enough in writing.

Previous researchers have stated that there are possible solutions to overcoming ESL students’ weakness in writing skills. One of them is by using online educational tools such as DS which was found to be able to improve writing skill in many aspects (Abdel-Hack & Ahmed Helwa, 2014; Duman & Göcen, 2015; Leong & Jafre, 2018; Pardo, 2014; Rahimi & Yadollahi, 2017; Sepp & Bandi-Rao, 2015; Siti Mariam et al., 2016; Thonghattha et al., 2016; Tsigani & Nikolakopoulos, 2018; Yee & Kee, 2017). Even though there have been many studies on writing skill, but the study on SLM secondary fully-residential school students’ narrative writing to our best knowledge is quite limited and the researcher feels that a study in this area needs to be carried out as there is a need to know the impact of DS towards Malaysian secondary fully-residential school students.
This paper attempts to answer the following questions:

1. What is the impact of DS in improving ESL secondary school students’ narrative writing essay in terms of vocabulary, grammar, content and overall performance?
2. What are students' perceptions of the use of DS in improving ESL secondary school students’ narrative writing skill?

The following section in this article will discuss the literature review associated with the use of DS in narrative writing. After that, the methodology of data collection is explained and followed by the analysis of the data gathered. The final section is the discussion of the data analysed earlier.

**Literature Review**

This research is based on the constructivism theory which was pioneered by Jean Piaget and Lev Vygotsky. Piaget’s theory of constructivism is based on cognitive development while Vygotsky’s work is about social constructivism (Sanders, 2016). These two psychologists are two of the most prominent figures in the field of constructivism. First of all, the theory of constructivism describes how knowledge is constructed when the student is given the material. Two important branches of constructivism are cognitive constructivism by Jean Piaget and social constructivism by Lev Vygotsky. According to Piaget, students construct knowledge through their experience. Whenever they experience something new, they would construct new schemata based on their previous experience. Sanders (2016), who cited Piaget (1964) believes that students are individual constructors of knowledge. They do not just sit and listen to the teacher. Instead, they take the knowledge and interpret this new material according to their previous existing knowledge (Elliot et al., 2000). When this process only happens within an individual, it is called individual or psychological constructivism. On the other hand, social constructivism was pioneered by Lev Vygotsky, a Russian psychologist. In the broad context of social constructivism, when students collaborate to solve certain tasks, they are constructing knowledge during the process. This is called Social Constructivism. Under this theory, through the concept of scaffolding, students should interact with the teachers and their friends to construct knowledge (Masek & Yamin, 2010). It is similar when students are influenced by their peers or by their family at home, they would go through the process of constructing their meaning of the knowledge that they get (Elliot et al., 2000). The theory of constructivism can best be seen in the writing task. When students learn to write or try to complete a writing task, they are applying this theory.

Writing is a form of human communication. It is the visual form of the language (Rahmawati, 2017). Byrne (1988) says that in writing, we write symbols to represent the sounds that we make but they should be arranged according to the correct order to form words and words should be arranged accordingly to form sentences. Furthermore, when we write several sentences in an order and they are connected in a certain particular order, they form texts. Therefore, writing requires a special skill so that those symbols and signs can be arranged in the right manner and the reader can understand what is written by the writer. There is a need for writers to be competent in making sentences and have a good range of vocabulary (Sulaiman, 2017). Anita (2016) highlights that a person needs to be proficient with the elements of writing, namely vocabulary, grammar, content, mechanics, organization and also style. This is echoed by Hapsari and Sukavatee (2018) who stated that writing skill requires a few elements such as composition, vocabulary, grammar
and mechanics. Yee and Kee (2017) mention that a writer needs to develop and manage ideas before transforming them into readable text and at the same time making sure the spelling, punctuation, grammar and others are correct.

To make writing more meaningful, there are certain writing processes that writers go through to complete a writing task. Primarily, there are two types of writing processes. The first one is product-based approach and the other one is process-based approach. The product-based approach is the traditional way of teaching writing whereby the emphasis is on the final product by mimicking a model text (Yee & Kee, 2017). Meanwhile, the process-based approach emphasises on the process of writing itself by which the various stages and activities that writers have to go through will improve the development of the language used (Yee & Kee, 2017). A writing process consists of planning, production, editing and revision as well as the integration of content and the coordination of the whole writing (Kelly & Melor, 2016). The stages or process of writing, as indicated by Tompkins (2008), is a process which the emphasis is more on what the writers think and do when they write, rather than on the finished product. Tompkins (2008), had divided the writing process into five stages namely prewriting, drafting, revising, editing and publishing. The process of writing applies the theory of constructivism. It is especially more relatable with this theory if the writing task is carried out in groups because the writers can construct new knowledge when they interact with each other.

Writing can be divided into many genres. One of them is narrative writing. Narrative writing is described as a series of events that are connected through time and causation (Trapsilo 2016). Sulaiman (2017) defines it as events in the form of a story. Adam (2015) explained it clearly by defining narrative writing as writing stories or reporting about certain events, which can be personal experiences or any real or fictitious events. It is usually written from the view-point of the first person which includes feelings, sensory details and other attractive elements to the readers (Hapsari & Sukavatee, 2018). There are five elements of narrative writing and they are plot, setting, characters, theme, and point of view (Tompkins, 2008).

It is a general agreement that DS is telling a story in the form of electronic. The users can combine text, audio, music, videos and pictures to create a digital story (Reinders, 2011). Later, the product can be shared on a computer or published on the internet (Robin, 2008). He also stated that there are two ways DS can be benefited in education. The first one is Teacher-created Digital Stories. Teachers create DS as a tool to improve students’ understanding of certain topics or content. Other than that, the greatest benefit of DS is when it is created by the students. Student-based Digital Storytelling is the second way of using it the classroom. Teachers can assign students to develop a DS which can be done individually or in a small group (Robin, 2008). This will improve students’ knowledge and academic skills as they would do research on the topic given, search for materials and create a Digital Story (Alismail, 2015). Aside from that, DS also promotes 21st Century skills such as digital literacy skills, global skills, technology literacy skills, visual literacy skills and information literacy skills (Robin, 2008). Hence, acquiring narrative writing skill with the help of DS shows that the learning theory of constructivism is the main underlying theory.
The Impact of Digital Storytelling on ESL Narrative Writing Skill

Zakaria & Abdul Aziz

Previous studies have shown that DS is beneficial in improving students’ writing and/or narrative writing skill. A research was administered by Abdel-Hack and Ahmed Helwa (2014) in Egypt and the finding claims that the improvement on students' narrative writing skill is significant. In America, Sepp and Bandi-Rao (2015) examined the use of DS in New York city, specifically at a community college. They found that the participants, who were 19 ESL students, improved their writing skills after they had used DS in their writing class. A more recent research was carried out in Malaysia concentrating on students’ point of view towards DS, whereby Siti Mariam et al. (2016) discovered that when working collaboratively, students managed to boost their narrative writing skill. Furthermore, Rahimi and Yadollahi (2017) highlighted that DS has a positive impact on students’ literacy skills which are reading and writing skills. Leong and Jafre (2018) conducted a case study with six primary five pupils in Malaysia regarding the use of DS. The research posited that there were improvements in their language skills and one of them was their writing skill.

Other than that, it is notable to mention that Duman and Göcen (2015) found that DS can improve students' vocabulary when they used DS with pre-service teachers in Turkey. They found that there was richness in the participants’ vocabulary compared to before the implementation of DS. Another study carried out by Leong and Jafre (2018) with six primary five pupils in Malaysia showed that the participants perceived that their vocabulary has improved after the implementation of DS.

Pardo (2014) mentions that participants who used DS also have improved their level of grammar proficiency. It was found that 21 undergraduates in Valencia had shown that there were fewer grammatical errors after they had experienced DS. Duman and Göcen (2015) also mention that the participants in their study had shown that there was more accurate use of grammar compared to before. In Turkey, a case study was carried out with 63 5th grade English as a foreign language (EFL) students and 3 teachers to identify the impact of DS among the participants. At the end of the study, the researchers found out that the participants had a good command of grammar rules and mechanics including spelling, capitalization, as well as punctuation (Dollar & Tolu, 2015).

Other than improving vocabulary and grammar, DS can also improve students’ creativity and contents of the writing. Researchers such as Pardo (2014) and Duman and Göcen (2015) have all agreed that DS is useful to help students to develop original ideas. Meanwhile, in Malaysia, Yee and Kee (2017) carried out qualitative research with eight student teachers and their finding also showed that the writing quality of the participants had increased, specifically in the aspects of organisation and content. This goes to show that after experiencing DS, participants can improve their writing content.

Previous studies have shown that DS improves students writing skill in various aspects. But, one crucial point to highlight is that DS also motivates students to write. This is once again proven by Thonghattha et al. (2016) in their research whereby they stated that DS increases motivation and intention towards the writing process. Likewise, Yee and Kee (2017) highlight that motivation increased and students learnt writing in a fun way. Apart from that, Tsigani and Nikolakopoulou (2018) also claimed that in a case study involving 11 6th grade pupils in Greece showed high motivation and commitment towards their work.
With all the studies mentioned, it prompts the researcher to further investigate the issue regarding ESL secondary school students writing in a more specific focus. With regards to improving students’ performance in English SPM examination, the researcher would venture into narrative writing and how DS can assist students’ writing ability. Although there have been numerous studies on ESL writing skill, but the study on Malaysian ESL secondary boarding school students’ narrative writing is found rather limited and the researcher feels it is high time for a study to be carried out as there is a need to know the impact of DS towards Malaysian secondary boarding school students’ narrative writing skill.

Methodology
This research intends to investigate the impact of DS on ESL secondary school students' narrative writing skill. To achieve that, a quasi-experimental study was carried out. The researcher conducted a pre-and-post test to evaluate the performance of the students before and after the implementation of DS. The intervention took 16 hours of lesson time. There were two groups of participants involved: controlled group and experimental group. It is important to note that based on the information from their English teachers, they had not learnt narrative essay writing prior to the pre-test. After the intervention, both groups sat for a post-test to determine their level of narrative writing ability. The researcher used the 2017 SPM English narrative essay question for both tests, the students would answer the same question. The validity and reliability of the question were not tested since the question was taken from the real SPM question which was constructed by experts and it is considered suitable for Form 4 students who would sit for SPM the following year. In pursuance of collecting qualitative data, the researcher conducted an interview session with the participants. The researcher chose to perform a semi-structured interview. The questions were adapted from Zainudin's (2016) research interview questions. The interview session was conducted after the post-test was carried out.

For this study, the participants were from a fully residential school in Selandar, Melaka. The school is situated in a rural area in Melaka whereby the school itself is a co-educational school. It was chosen because it is a fully residential school and has students from different backgrounds. They are selected students from their Ujian Pencapaian Sekolah Rendah (UPSR) examination results and most of them come from the southern part of Peninsular Malaysia. The background diversity of the students is suitable to carry out this research as their background will not influence the outcome of this study. Another reason for choosing this school is because of the accessibility factor. The researcher was allowed to access the school and carry out the research. The participants were selected from Form four students of the school through convenient sampling because the school does not implement simultaneous English lesson and the researcher could not choose the participants specifically for this research. Hence the reason why the researcher adopted convenience sampling. There were two groups of participants i.e. a controlled group with 25 students and an experimental group with 27 students. The researcher chose Form four students because they will sit for SPM examination the following year.

The scores were obtained from the pre and posttest which were assessed using a writing assessment adapted from Wong (1989)'s Qualitative Writing Scale. After the scores were gathered, the researcher analysed the data to look for data normality. After that, mean scores for
both tests to determine which mean score was higher and if there was an improvement or not after the intervention program. Apart from that, the researcher made a comparison between the means of both groups to come up with a conclusion of which group performs better. The next analysis was to figure out whether there was any significant difference after the intervention program. Not only that, a test was also carried out to check if there was any significant difference between the two groups. As for the data gathered from the interview session, the researcher conducted a thematic analysis to get an insight of the participants’ perception towards DS.

Findings
This study was carried out to investigate the impact of DS on narrative writing skill of ESL secondary school students, especially fully-residential school students. All data were analysed using Statistical Package for the Social Sciences (SPSS) version 23.

Before further analysis was carried out, it is important to know the nature of data distribution throughout the sample whether they are normally distributed or not. Since the number of samples selected is less than 50, a Shapiro-Wilk test is suitable to be carried out (Razali & Yap, 2011). Table 1 shows the result from the Shapiro-Wilk test.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Tests</th>
<th>Content</th>
<th>Language</th>
<th>Vocabulary</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Pre-test</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.013</td>
</tr>
<tr>
<td>Group (n = 27)</td>
<td>Post-test</td>
<td>0.02</td>
<td>0.001</td>
<td>0.004</td>
<td>0.118</td>
</tr>
<tr>
<td>Controlled</td>
<td>Pre-test</td>
<td>0.001</td>
<td>0.007</td>
<td>0.000</td>
<td>0.163</td>
</tr>
<tr>
<td>Group (n = 25)</td>
<td>Post-test</td>
<td>0.004</td>
<td>0.002</td>
<td>0.002</td>
<td>0.21</td>
</tr>
<tr>
<td>p &gt; 0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In summary, all data collected show that they are not normally distributed (p < 0.05) except for overall post-test score for the experimental group, overall score for pre-test and post-test for the controlled group (p > 0.05)

RQ1. What is the impact of DS in improving ESL secondary school students’ narrative writing essay in terms of vocabulary, grammar, content and overall performance?
To answer this question, data were collected from the pre-test and post-test and were analysed to look for the mean scores for both tests from both groups. Table 2 shows the result from the analysis:

<table>
<thead>
<tr>
<th>Groups</th>
<th>Test</th>
<th>Content</th>
<th>Language</th>
<th>Vocabulary</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Pre-test</td>
<td>2.6</td>
<td>5.2</td>
<td>2.4</td>
<td>13.3</td>
</tr>
<tr>
<td>Group (n = 27)</td>
<td>Post-test</td>
<td>3.3</td>
<td>6.5</td>
<td>3.3</td>
<td>16.6</td>
</tr>
<tr>
<td>Controlled</td>
<td>Pre-test</td>
<td>3.0</td>
<td>5.5</td>
<td>2.8</td>
<td>14.5</td>
</tr>
<tr>
<td>Group</td>
<td>Post-test</td>
<td>3.2</td>
<td>6.2</td>
<td>3.2</td>
<td>15.9</td>
</tr>
</tbody>
</table>
From the analysis, it can be seen that all scores for post-tests are higher than the pre-tests in all categories. In comparison between the experimental group and the controlled group, the result shows that the mean score for the pre-test for the experimental group is lower than the controlled group. However, after the intervention was carried out, the experimental group performed better than the controlled group. This clearly shows that DS does bring a positive impact on students' narrative writing skill.

To further analyse the data, an inferential analysis was carried out to check whether the improvement is significant or not. To achieve that the Wilcoxon Signed Rank test was the most suitable test since the data are not normally distributed as shown in Table 1.

**Table 3 Wilcoxon Signed Rank test result for the experimental group.**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Ranks</th>
<th>Asymp. Sig. (2-tailed)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>18.00</td>
<td>0.002</td>
<td>Significant</td>
</tr>
<tr>
<td>Language</td>
<td>13.00</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0.00</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>12.00</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

p < 0.05

Table 3 shows the data analysis using the Wilcoxon Signed Rank test for the experimental group. The Wilcoxon Signed Rank test was conducted to check whether there is a significant difference after the intervention program. Research shows that there is a significant difference between the scores before and after the program with \( w(26) = 12.00, p < 0.05 \) for overall performance. This proves that DS can improve students’ narrative writing skill.

**Table 4 Wilcoxon Signed Rank test result for the controlled group.**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Ranks</th>
<th>Asymp. Sig. (2-tailed)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>32.50</td>
<td>0.317</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Language</td>
<td>12.00</td>
<td>0.020</td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>13.00</td>
<td>0.012</td>
<td>Significant different</td>
</tr>
<tr>
<td>Overall</td>
<td>25.00</td>
<td>0.003</td>
<td></td>
</tr>
</tbody>
</table>

p < 0.05

Table 4 shows the result of Wilcoxon Signed Rank test for the controlled group which was carried out to see whether the scores of post-test have any significant difference compared to pre-test after being taught without DS. Research shows that there is a significant difference between the scores of the pre and post-test with \( w(24) = 25.00, p < 0.05 \) for overall performance. However, there is no significant difference between the score of content for pre-test and post-test with \( w(24) = 32.50, p > 0.05 \). This finding shows that the controlled group’s improvement after they had learnt how to write narrative writing is significant but not significant for content.
Table 5 Independent t-Test results for the post-test.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Leven’s Test</th>
<th>Sig. (2-tailed)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>16.56</td>
<td>4.74</td>
<td></td>
<td></td>
<td>Not significant</td>
</tr>
<tr>
<td>Controlled</td>
<td>15.92</td>
<td>4.05</td>
<td>0.606</td>
<td>0.607</td>
<td>p &lt; 0.05</td>
</tr>
</tbody>
</table>

Since both data are normally distributed, an Independent t-Test was carried out to check whether there is a significant difference in the improvement of the experimental and controlled group after the intervention program. Research shows that there is no significant difference in the improvement between the two groups with t (50) = 0.518, p > 0.05. Hence this shows that the difference in the mean score is not significant.

RQ2. What are students' perceptions on the use of DS in improving ESL secondary school students' narrative writing skill?

After the quantitative data are collected, a semi-structured interview was carried out to answer the above question. Nine participants were involved in the interview session whereby they were interviewed individually. During the interview, by participants eight and nine, the data gathered was considered saturated. Each interview was transcribed and analysed thematically. As a result, two categories were identified.

1. Digital Storytelling motivates students to write.

In the interview, all participants were asked about their opinion regarding DS. All participants expressed their positive feeling towards DS. Six participants mentioned that they found DS as interesting.

“I feel it’s interesting.”

“More interesting because it has … aaa … pictures …”

“I feel interested.”

They found DS interesting because of various reasons such as the use of pictures and computers during the writing process which help them a lot in narrative writing.

“… we can insert pictures other than writing.”

“So, when I use the computer I doesn’t feel sleepy.”

“Because I like learn in computer.”

“I just need to type.”

Other than that, one participant highlighted that she felt excited about creating DS. She stated, "I feel excited …". Another participant mentioned that he found it "a bit more easier … I can write more easily because the picture." One participant, cheerfully answered “Happy, happy!” because it was something new for her. Besides that, all participants were asked if they were willing to do DS again and all of them answered similarly which is they would do it again.

2. Digital Storytelling helps them to write better.

It was found that some of the participants mentioned that DS helped them to generate ideas to write a narrative essay because of the use of pictures in DS.

“... give me idea to write the story.”
“Because we can imagine how story and the character.”
“Yes, I can more imagine.”
“I can produce more ideas and make a interesting story.”

Interestingly, one participant expressed that the pictures made her difficult to write the story. When asked further, she mentioned, "I need to think what I can do with this picture." She also clarified that she had to adjust her story to match with the pictures and added: "after this I need to write a story where I need to see the picture first.” Besides that, the process of creating Digital Stories required the participant to publish their work. This stage has been beneficial to them because they could garner more ideas by reading their friends’ Digital Stories.

“... because I see others people story so I feel inspired. So, I have more ideas.”
“... when I read my friends’ stories ... aaa ... it’s different than our group stories. So, I can get more ideas.”

The participants also highlighted that their friends would show the grammatical errors during their group work.

“...because we make Storybird by group, so when we write something, my friend will give some advice.”
“When I write the story, my friend told me my wrong grammar ...”
“When we work in group, we ... we discuss our grammar.”

Furthermore, the participants managed to improve their vocabulary by searching for new words from various websites.

“My sentence in the narrative writing become more longer.”
“Because I can use new word.”
“From internet dictionary I find the new words.”

These findings clearly show that participants think positively towards DS, which they perceive as beneficial in improving their narrative writing skill.

Discussion
The present paper studied the impact of DS on ESL narrative writing skill. For this purpose, the experimental group learnt narrative writing by creating digital stories while the controlled group learnt narrative writing through the traditional method. Data collection was carried out through pre and post-test and semi-structured interview.

The mean analyses of the data revealed that the post-test mean scores were higher than the pretest mean scores. This proves that DS has a positive impact on narrative writing skill. This finding echoes other previous researches' result which is DS improves narrative writing skill (Abdel-Hack & Ahmed Helwa, 2014; Leong & Jafre, 2018; Saputro, 2013; Sepp & Bandi-Rao, 2015). To discuss further in detail, it was also found that the content, language and vocabulary have also improved after the treatment with DS. The Wilcoxon Signed Rank test proved that there is a significant difference after the treatment. Previous related studies have also demonstrated similar results whereby the participants showed a significant improvement in the aspects of content (Duman & Göcen, 2015; Pardo, 2014; Yee & Kee, 2017), grammar (Duman & Göcen, 2015; Pardo, 2014; Ramirez, 2013) and vocabulary (Duman & Göcen, 2015; Leong & Jafre, 2018; Ramirez, 2013). In light of this result, it can be argued that when the process of creating DS is incorporated with the five stages of the writing process, it contributed to the development of the experimental group's narrative writing skill. DS has certain features that improve narrative writing
skill. For example, the use of pictures helped the participants to generate more ideas. This is because they can have a clear understanding of the events or scenarios in the story with the help of pictures (Robin, 2008). On top of that, the process of creating DS also contributed to this positive result. Participants were required to create Digital Story in groups. There would be discussions as they worked and collaborated to create a Digital Story along the stages of process-writing. This would lead to the construction and acquisition of knowledge. As the Theory of Constructivism pointed out that when students interact with teachers and their friends, this would to construct knowledge (Masek & Yamin, 2010). Hence, this shows that this process is fundamental in creating a positive impact on narrative writing skill.

However, the independent t-test showed that the difference in the post-test mean score of both groups are not significant (p > 0.05). Previous studies posited that although the mean score shows improvement, it is not significant enough. This could be since the participants had not learnt narrative writing prior to the pre-test. So, after both groups have learnt about narrative writing, it would lead to an increase in their writing performance. Even though the controlled group learnt narrative writing without the use of DS while the experimental group learnt narrative writing by integrating DS in their lesson, both groups still showed improvement simply because they had learnt something new to them. However, there was more value added to the experimental group which was DS. Hence, the reason why the experimental group shows a higher post-test mean score compared to the controlled. Regardless of the difference, it is still not significant. Possibly, if the participants have already learnt narrative writing before, it is anticipated that the difference would be significant because the experimental group experiences value-added intervention program only throughout the experiment period. Whereby the controlled group would only repeat the previous lesson on narrative writing.

From the interview, it can be concluded that DS motivates students to write (Thonghattha et al., 2016; Tsigani & Nikolakopoulou, 2018; Yee & Kee, 2017). As mentioned by the participants, they found DS interesting and felt excited about it. Yee and Kee (2017) also found their participants experience the same thing. The reason is because pictures managed to attract them to be involved in the writing process. It helped them to have a clear image of what they were going to write about. On top of that, the use of computer was very appealing to them and made them felt excited about DS. Nowadays, students are very much attracted to lessons that involve technology. As a result of group work, participants felt that they were able to write better. This is because they felt that they could generate ideas, improve their grammar and vocabulary (Duman & Göcen, 2015) since they could discuss about it and help each other to improve their work. In this situation, the Theory of Constructivism played an important role. While creating Digital Stories, they explored the web to improve their writing in those key areas in narrative writing. Besides, the ability explore the internet to comb for information and evaluate them to be used in their writing is one of the 21st Century skills promoted by DS (Robin, 2008). More importantly, they are willing to create Digital Stories again. This proves that DS motivates students to write as they felt that it could improve their narrative writing skill.

**Conclusion**
This study aims to see the impact of DS on ESL narrative writing skill. Since technology plays an important role in everyone's life, DS can capture students' interest in writing. The findings have
revealed the potential of DS in improving students' narrative writing. Nonetheless, it is essential to understand that this study does not claim that DS is a definitive method that can guarantee an improvement in narrative writing. Instead, it only suggests that DS is a tool to improve narrative writing. It is hoped that it would create an awareness to the teachers of the alternative method of teaching narrative writing i.e by integrating DS in the lesson. At the same time, this study will add to the current pool of literature regarding DS except with a slight difference in the finding which shows any result is possible given any situation. On top of that, it also can give an interesting option for future researchers to continue and this study because of the different results.

Time was an important factor in this experimental study. The current study had limited time to carry out this experiment because the DS tool used only allowed one month of free trial period. So, the experiment could only be carried out for one month only. On top of that, the participants were going to sit for their mid-year exam and the teacher-in-charge had a lot to catch up in terms of the syllabus. Hence, a longer period was not a luxury for the researcher. For future studies, the researcher suggests that a longer time to be allocated for the intervention program to see whether it would yield a better result or not. Other than that, a different method of sampling can be used such as purposive sampling. Furthermore, other researchers can focus on other language skills which are listening, speaking and reading.

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