The Effect of Blended Learning on EFL Students’ Grammar Performance and Attitudes:
An Investigation of Moodle

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Abstract
Empowering new generations with technology through employing blended learning approach to teach English as a Foreign Language has been recently investigated by many researchers in various contexts. This mixed-methods study aimed at examining the effects of the blended learning approach on Jordanian EFL learners’ grammar performance. The study also aimed at investigating the attitudes of Jordanian EFL learners toward blended learning. To achieve the objectives of the study, it employed a quasi-experimental design (pre and posttests) followed by qualitative interviews. The participants were divided into two groups: experimental and control groups. Among the 28 students in the sample, those in the experimental blended learning group (n=13) were taught using Moodle while those in the control group (n=15) were taught using conventional methods. All the 13 participants in the experimental group were interviewed. The results of the posttest revealed that students in the experimental group outperformed students in the control group. Furthermore, the qualitative analysis results showed that blended learning had a positive impact on the learners’ English grammar performance and that they were strongly satisfied and motivated to learn English using similar methods. It is concluded that blended learning could be used as an effective method of teaching English grammar in EFL settings. It is hoped that these results will help the university, faculty, and students to develop the skills necessary for blended learning.

Keywords: attitude, blended learning, EFL students, grammar, Moodle, Performance

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Introduction

Blended learning has become a reality in contemporary education, as more and more educational institutions race to adopt and implement it to provide an attractive and stimulating learning environment. While many universities in Jordan have at least partly implemented blended learning to leverage its benefits, online learning is still in the elementary stage at Irbid National University (INU), where it is utilized only as an aid to support learning and teaching in regular classrooms. Still, the university is encouraging faculty to take serious steps toward integrating online learning into their regular classes.

The department of English language and literature has begun to consider online learning and attempted to integrate it into basic skills and grammar classes. However, EFL learning is a complicated process that requires substantial efforts to successfully immerse EFL learners in the language. Further, learning grammar is considered the most tedious skill in learning English, even though failing to comprehend grammar rules often leads to communication failures (Schulz, 2001). It is assumed that blended learning can help both EFL teachers and learners reach higher grammar proficiency by improving their learning practices and utilizing technology to create innovative learning experiences. Thus, many learning management systems (LMS) have been designed to support learning and teaching experiences, such as Moodle, Easy LMS, OpenEdX, LearningCart, and many others. Moodle, the Modular Object-Oriented Dynamic Learning Environment, is utilized by the majority of Jordanian universities (Bataineh & Mayyass, 2017). Recently, INU has been promoting Moodle to complement conventional classroom instruction and online tools such as YouTube, Facebook, and email. Thus, this study aimed at achieving the following objectives:

a) to examine the effects of blended learning on Jordanian EFL learners’ grammar performance
b) to investigate the learners’ attitudes toward utilizing blended learning.

This study attempted to answer the following research questions:

1. Does blended learning affect Jordanian EFL learners’ grammar performance?
2. Are Jordanian EFL learners motivated to learn English using blended learning?

Literature Review

Blended Learning

Several researchers (Friesen, 2012; Graham, 2006; Poon, 2013) have defined blended learning as an instructional curriculum which blends online materials with traditional classroom learning. Both teachers and learners must engage in blended learning, especially since the shift from teacher-centered education to learner-centered education means the learner actively takes a major part in the learning process by utilizing online learning. Nevertheless, there are different models representing the implementation of blended learning, such as an online driver, self-blended, labs, flex, rotation, and face-to-face driver (Horn & Staker, 2015). For the current study, a face-to-face driver model is adapted, using digital tools to drive EFL education.

The benefits of blended learning cannot be denied, especially at the university level (Wall & Ahmed, 2008; Garrison & Kanuka, 2004; Poon, 2012). Specific advantages include:

1. Encouraging dynamic, simultaneous, free, joint and significant learning experiences
2. Helping learners to accomplish satisfaction and achievement effectively
3. Enhancing learning and outcomes, including content, objectives, materials, procedures, and assessment
4. Dealing more effectively with individual differences
5. Managing and controlling the class easily
6. Reducing the cost per credit hour.

On the other hand, blended learning can be a challenge if it is not implemented properly. For instance, university learners and their teachers should be confident and supported, as they are the most vital members of successful and permanent implementing blended learning (Darrow et al., 2013). According to previous scholars (Graham et al., 2005; Hofmann, 2011; Milheim, 2006), potential challenges to blended learning include:

1. The accessibility of technology and the internet.
2. The need for an LMS matching all the learners’ and teachers’ needs.
3. Aptitudes and attitudes to cope with new technology.
4. Live and easy interaction to address learners’ questions.
5. Cultural adaptation to balance modernity with maintaining one’s identity and values.
6. Management of the class to assess and observe the learners.

Moodle

Moodle is one of the most well-known LMS with which instructors, administrators, and learners form personalized learning settings. Moodle courses include resources and activities of approximately 20 distinct sorts, such as quizzes, assignments, forums, and polls. These activities can help both teachers and learners navigate and complete courses. Consequently, more than 90 million people from both academic and enterprise settings use it because of its a) ease of use, b) lack of licensing fees, c) multipurpose platform, d) flexibility, e) security and privacy, f) accessibility, g) free content and courses, and h) availability in multiple languages (Moodle, 2018). Using technology to design a language learning class helps EFL learners improve their English language skills along with giving them numerous chances to practice those skills (Butler-Pascoe, 2003). However, Moodle also can assist in learning many English subjects like grammar. EFL teachers can integrate Moodle content, for example, into their regular language teaching classrooms take advantage of the available activities and sources, such as by providing real interaction with people from different backgrounds who share the same interests and by fostering a truly collaborative learning environment.

Past Studies

Many researchers have considered blended learning in teaching English in EFL settings. Recently, Isti’anah (2017) explores the effect of blended learning on students’ grammar achievement. Twenty-six Indonesian university students were involved in this study. Analysis of pretest and posttest scores reveal that blended learning had a positive effect on learning English grammar and that it assists in enhancing the students’ awareness of and interest in learning grammar. In another study in Thailand, Pumjarean et al. (2017) investigates the impact of blended e-learning on the grammatical knowledge and writing skills of 54 English major freshmen, their perceived satisfaction with Moodle’s learning management system, and the effectiveness of blended learning for enhancing grammatical competency and paragraph writing skills. Their quasi-experimental design utilizes two instruments, namely a questionnaire and pre and post achievement tests. The findings shows that the students’ grammar competence is improved, but the students are neutral regarding their satisfaction with Moodle’s LMS.
In their study, Aslani & Tabrizi (2015) investigates blended learning among 87 Persian EFL learners. The findings demonstrate that blended learning has an encouraging effect on Iranian students’ grammar performance. In another study by Ahmad (2016), at a private college in Saudi Arabia, he explores the impact of Facebook on sixty EFL university students’ writing and grammar skills, utilizing achievement tests. The findings of the study reveal that Facebook has a positive effect on the EFL students’ performance on both writing and grammar. In his study, Alshwiah (2009) explores the impacts of a proposed blended learning strategy for teaching medical vocabulary to 50 EFL university students. The findings reveal that the experimental group students (n=28) are more satisfied with online learning when compared to the control group (n=22) due to administrative issues.

In the Jordanian context, only a few studies were conducted to investigate the effect of blended learning on EFL students’ grammatical performance. Bataineh & Mayyas (2017) carry out a quasi-experimental study to explore the effect of blended learning on 32 Jordanian EFL learners’ grammar and reading comprehension in a state university, where Moodle is utilized in some classes. In their experimental group, Moodle is used to complement the conventional classroom. The findings reveal that the students in their experimental group outperform the students of the control group in grammar as well as reading comprehension. In general, Obiedat et al. (2014) find that blended learning has a positive and significant impact on university students’ academic achievement. They conduct a survey study on a sample of 427 university students to investigate the usefulness of blending learning on academic achievement.

Another study by Fakhir (2015) explores the impact of utilizing blended learning on the academic achievement of 50 female students and their attitudes towards blended learning. To obtain the desired data, an achievement test and a questionnaire are applied. The findings reveal that utilizing blended learning has a positive impact on the attitudes of the experimental group, which do better than the control group in learning English grammar and vocabulary. The study argues that blending learning is better than conventional learning due to this improvement in the students’ achievement. Finally, Al-Haq & Al-Sobh (2010) use a web-based EFL program, to identify a positive impact of blended learning on Jordanian students’ writing achievement. Their sample includes 122 male and female secondary school students. As online learning is still in the elementary stage at INU, the current study attempts to investigate the effects of blended learning on Jordanian EFL learners’ grammar performance and their attitudes toward utilizing blended learning. The findings of this study depict a realistic picture of how they personally perceived blended learning and its effect on their performance.

Methodology

Participants and sitting

The participants of this study were 28 Jordanian graduate learners enrolled in the English language department at INU during the first semester of the 2018–2019 academic year. All the participants were enrolled in one of two grammar classes that met for three hours a week. The same instructor taught both classes and used the same textbook: *English Grammar in Use* by Raymond Murphy. Randomly, one class (13 learners) was assigned to the experimental group while the other (15 learners) was assigned to the control group. The control group learners were taught by face-to-face lectures alone while face-to-face lectures taught the experimental group learners with Moodle supplementation. The Moodle supplementation included Prezi presentations, videos, homework assignments, and quizzes. A brief introduction to Moodle was given through a...
one-day training to the entire experimental group. After preparing the online instructional material, the lecturer eagerly provided educational and technical assistance via email, forum posts, or online chat. The posted content included Prezi presentations about grammar (for instance, question tags), grammar activities, and quizzes.

**Instruments**

Two instruments were utilized in this study: pre and posttests and semi-structured interviews. In selecting the pre and posttests from the course test bank, the researchers sought to cover all the course content, which includes ten textbook chapters on different grammatical subjects. At the beginning of the semester, all the participants completed a pretest of forty multiple-choice questions. A posttest containing the same questions was given to the learners at the end of the course. After exploring the posttest data and the related literature, lists of key issues, ideas, and questions were then prepared for the interviews. As the population of the experimental group was not large, all 13 learners were interviewed to explore their attitudes toward utilizing blended learning. This is also vital in providing a clear picture of how they personally experienced blended learning.

To guarantee the validity of the tests and the interview questions, they were given to five professors of the English language, then revised according to the professors’ amendments and advice. A pilot test study was also conducted to test the strength and consistency of the internal reliability (Cronbach's alpha) of the test. The test was completely reliable, as the reliability coefficient for the pilot study was measured at 0.83. The pilot study also tested the clarity of the interview questions and gave the researchers a little practice for the interview. As much as possible, the pilot study was designed and planned to reflect the actual study to be carried out.

**Research Design and Data Analysis**

To investigate the effect of blended learning on Jordanian EFL learners’ grammar performance and their attitudes toward utilizing blended learning, this mixed method study employed a quasi-experimental design (pre and posttest) followed by qualitative interviews to clarify student outcomes. Mixed methods research is a helpful strategy for forming a full understanding of the research problem (Creswell, 2014).

Utilizing SPSS (Version 15.0), the pre and posttest results were analyzed. Descriptive analyses (means and standard deviation) were conducted to describe the pre and posttest results. Analysis of Covariance (ANCOVA) was then employed to find out which group was significantly different. For the interview, the data were analyzed using interview analysis, which involves placing the raw data into categories based on the similarities that emerged in the characteristics of the data (Creswell, 1998).

**Results**

The findings are presented and discussed in light of the research topics: how blended learning affected learners’ grammar performance and their motivation to continue learning English using blended learning. Table 1 addresses the first research question, which examines whether there is any effect of blended learning on Jordanian EFL learners’ grammar performance. The means and standard deviations of the pre and posttest scores were compared to describe the grammar performance of both the experimental and control groups.
Table 1. Descriptive statistics of pre and posttest.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre Test</th>
<th>Post Test</th>
<th>Adjusted Mean</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Control</td>
<td>7.33</td>
<td>3.519</td>
<td>11.47</td>
<td>3.720</td>
</tr>
<tr>
<td>Experimental</td>
<td>7.31</td>
<td>2.626</td>
<td>15.54</td>
<td>3.178</td>
</tr>
</tbody>
</table>

Table 1 shows that the posttest mean of the experimental group (15.54) was higher than the pretest mean of the control group (11.47). However, the pretest means of both groups (experimental 7.31 and control 7.33) were almost alike. The data also shows a difference in the adjusted means (4.09) in favor of the experimental group. The inferential statistical technique ANCOVA was conducted to find the difference in the adjusted mean post-test scores between the control group and the experimental group, as shown in Table 2.

Table 2. ANCOVA results of the differences in the adjusted means of the learners’ grammar posttest scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>254.226</td>
<td>2</td>
<td>127.113</td>
<td>18.035</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>268.563</td>
<td>1</td>
<td>268.563</td>
<td>38.104</td>
<td>.000</td>
</tr>
<tr>
<td>Pretest</td>
<td>138.761</td>
<td>1</td>
<td>138.761</td>
<td>19.688</td>
<td>.000</td>
</tr>
<tr>
<td>Group</td>
<td>116.535</td>
<td>1</td>
<td>116.535</td>
<td>16.534</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>176.203</td>
<td>25</td>
<td>7.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5426.000</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>430.429</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .591 (Adjusted R Squared = .558)

As illustrated in Table 2, the adjusted mean of the control group (11.46) was found to be lower than that of the experimental group (15.55). This reveals that there is a significant difference in the adjusted means of learners’ grammar posttest scores, in favor of the experimental group (F=16.534 and p=.000).

The second research question evaluates the motivation of EFL learners for learning English using blended learning. In face-to-face interviews with all 13 students of the experimental group, seven questions were discussed. The first interview question was designed to measure students’ willingness to learn grammar using blended learning method. The students were very enthusiastic about using blended learning, and almost all of them (n=12) stated that they like learning English grammar using blended learning. For instance, Participant 1 stated: “Yes, of course. I really enjoyed during this grammar class.” Participant 7 replied, “I like the new class method.” Participant 9 said, “Yes, I would like to learn grammar and other courses with this method.” On the other hand, Participant 10 was not enthusiastic about blended learning, stating, “To me, the previous “traditional class” was more useful than the blended class. I don’t enjoy it.”

The second question examined the perceived importance of using blended learning. It was found that the majority of the students believed that using blended learning is very important. One of the students (Participant 2) stated that “using Moodle is very important as I can easily get in touch with my professor.” Also, Participant 13 stated that “using this method is really important. This method facilitates the whole class.” The third question investigated whether the students were
satisfied with the blended learning experience. It was found that almost all of the students were satisfied with their experience and content with the online materials and quizzes. For instance, Participants 12 and 4 mentioned that:

“Yes, I am so satisfied with this experience. Although we had some issues in understanding the Moodle at the beginning, but everything went well and of course having all materials online allow me to repeat the presentations at home” (Participant 12).

“Yes, I am. The online quizzes were really superb especially the immediate feedback. I mean you can know the results immediately with the correct answers” (Participant 4).

The fourth question evaluated whether the use of blended learning has fostered or hindered the grammar learning. All the students emphasized that using blended learning has fostered their grammar performance. In their words:

Participant 4: “Yes, it fostered my learning. I can do my exercises in any place and at any time.”

Participant 5: “Sure, the online lessons were more attractive. I mean the lessons are well developed and organized.”

Participant 3: “Yup, it helped me a lot as I could learn in a very relaxing and comforting atmosphere. I am that person who is very timid and don’t like to participate in the class.”

The fifth question sought to identify the benefits of utilizing blended learning from the students’ points of view. According to the majority of the interviewees, blended learning is beneficial for many reasons, which are summarized below:

1. Creating a flexible and relaxing setting that accounts for all the individual differences.
2. Easy to freely access the learning resources through mobile phone and other devices.
3. Assisting students to better understand the grammar rules.
4. Attracting students’ attention and making them more involved in the given grammar tasks.
5. Online assessment and its immediate feedback.
6. Promoting the interaction between the students and the lecturer and maximizing the active participation among the students.
7. Enhancing students’ computer skills such as downloading and uploading documents, creating good presentations, and benefitting from websites related to learning the English language.

The sixth question sought to identify the detriments of utilizing blended learning. The obtained data revealed that the students encountered a lack of appropriate technological infrastructure. They reported that the English language lab was not modern and that they had technical difficulties with the computers, internet network, software, and technical support services. The students also reported that the internet speed was not good enough, so they relied on their mobile phones more. For instance, Participant 4 noted that “the main issue was the lab. The computers were old. I remember that one day the internet was awfully slow and no one could repair the problem.”
The final interview question assessed whether online learning could totally replace “face-to-face” education. The majority of the students (n=10) disagreed that online learning could replace the traditional method. They suggested using online learning along with traditional methods. They also placed a great value on personal communication with the lecturer. For instance, Participant 1 responded, “No, I don’t think so. I know that technology is growing very fast. But, having face to face discussion with my lecturer and colleagues is very valuable.”

On the other hand, three students agreed that online learning could totally replace the traditional method. They were very enthusiastic toward online learning as it may facilitate the learning process. One of them stated, “yes, online learning can completely take the place of face to face education. Technology will be integrated into almost everything. Our life will be easier” (Participant 6).

Discussion

The quantitative results showed that the students in the experimental group outperformed those in the control group. This reflected that blended learning had a positive impact on students' grammar performance. Further, the results revealed that integrating technology as a main part of the learning and teaching process can succeed. Integrating technology allows students to learn in a motivating and inspiring way in accordance with their individual abilities. The result of this study is compatible with many previous studies, such as those by Aslani & Tabrizi (2015), Bataineh & Mayyas (2017), Isti’anah (2017), Fakhir (2015), & Pumjarean et al. (2017), all of which support the statement that blended learning has a positive impact on the performance of learners in English grammar.

Moreover, the qualitative results showed that the interviewed students enjoyed the new experience of blended learning. They were strongly satisfied with and motivated toward learning English using a blended learning method. The majority of the students believed that using blended learning is very important to foster their studies. Despite some technical issues, the students believed that blended learning could help them better understand the lesson and improve their computer skills in a flexible and relaxing setting that accounts for all their individual differences. Thus, they suggested that using online learning along with conventional methods. This helps students to practice what they have learned in front of the class and get the lecturer’s support and feedback. These findings concur with those of Al-Haq & Al-Sobh (2010), Fakhir (2015), & Pumjarean et al. (2017), which affirmed that students are motivated toward learning English by using blended learning. Also, the findings of this study agree with findings by Wall & Ahmed (2008), Garrison and Kanuka (2004), & Poon (2012), who found that utilizing blended learning is very advantageous.
Conclusion and Recommendations
In conclusion, the results of this study showed that utilizing blended learning had a positive impact on the performance of learners in an English language grammar course. Learners in the experimental group engaged in a dynamic, simultaneous, free, joint, and significant learning experience. Based on the results, the researchers recommend that the university should implement the blended learning method in all its graduate courses, especially English language lectures. The university should take serious steps to update the computer and language labs with new technology and provide special training on the Moodle system for students, faculty, and employees. Faculty should be encouraged to utilize blended learning in their classes. Finally, more research should be conducted to examine the effectiveness of blended learning in Jordanian universities and its impact on students’ performance. It is hoped that the results of the present study help university, faculty, and students develop the skills necessary for blended learning.

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