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The Impact of Using a Customized Mobile Application on the Achievement of the University of Jordan English Students on English Syntax and their Attitudes towards the Application

Sadia Mohammad Salem, Nayel Al-Shra'ah

School of Educational Sciences, The University of Jordan, Jordan.

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Abstract

The present study aims at investigating the impact of using a customized-mobile application on the achievement of the University of Jordan English students on English Syntax and exploring their attitudes towards the application. Participants of the study were (74) UJ English students, who were distributed in two sections: a control group (37 students) and an experimental group (37 students). Two research instruments were used to collect data: an achievement test and an attitude questionnaire. Research findings revealed that the experimental group, who used the customized mobile application (Syntatopia app), showed significantly higher gains in their mean scores on the Syntax achievement test compared to those of the control group. Results also revealed that there were positive attitudes in all the questionnaire domains among the experimental group. Based on the findings, the researcher recommends that educators, curricula planners, and application designers should develop more course-based mobile applications for teaching and learning English syntax courses.

Keywords: Customized-mobile application, M-Learning, MALL, achievement in English Syntax, attitudes.

أثر استخدام تطبيق موبايل مصمّم خصيصًا لتدريس النَّحو في اللُّغة الإنجليزيّة في تحصيل الطلبة متخصّصي اللُّغة الإنجليزيّة في الجامعة الأردنيّة ورصد اتجاهاتهم نحو التطبيق

سعدية محمد سالم، نايل الشرعة

كليه العلوم التربوية، الجامعة الأردنية.

ملخّص

حاولت هذه الدراسة استقصاء أثر استخدام تطبيق موبايل مصمّم خصيصًا لتدريس ماده النَّحو في اللُّغة الإنجليزيّة في تحصيل الطلبة متخصّصي اللُّغة الإنجليزيّة ورصد اتجاهاتهم نحو التطبيق. لتحقيق هدف الدراسة قامت الباحثة باختيار عينه قصديّة تكوّنت من (74) طالبا وطالبة من متخصّصي اللُّغة الإنجليزيّة في الجامعة الأردنيّة ممّن يدرّسون لدى نفس عضو هيئه التدريس موزعين في شعبتين: المجموعة الضابطة وتكوّنت من (37) طالبًا وطالبة تمّ تدريسهم باستخدام الأسلوب الاعتيادي، والمجموعة التجريبية التي تكوّنت من (37) طالبًا وطالبة تم تدريسهم باستخدام تطبيق الموبايل. واستمرّت التجربة مدّة ستة أسابيع في الفصل الصيفي من السنة الدراسية 2018. وأظهرت الدراسة وجود فروق ذات دلالة إحصائيّة عند مستوى الدلالة (α=0.05) في المتوسطات الحسابية لتحصيل طلبة المجموعة التجريبية في الاختبار البعدي تُعزى إلى طريقه التدريس باستخدام تطبيق الموبايل. كما أظهرت نتائج الاستبانة وجود اتجاهات إيجابيّة نحو التطبيق بين مستخدميه. وعليه، فتوصي الباحثة المعلّمين ومطوّري تطبيقات الموبايل على العمل معًا لتطوير تطبيقات موبايل تعدّ خصيصًا لتدريس مساقات تخصّص اللُّغة الإنجليزيّة وتجمع كلًّا من الأبعاد التكنولوجيّة والأبعاد المعرفيّة، كما توصي الباحثين في المستقبل بإجراء دراسات مشابهة حول أثر استخدام تطبيقات موبايل تصمّم خصيصًا لتدريس في مواد أخرى في قسم اللُّغة الإنجليزيّة، من مثل موادّ: الصوتيات، واللغويات، ونحو 2.

الكلمات الدالة :تطبيقات الموبايل المصممّة خصيصًا، التعلّم بواسطة الموبايل، تعلّم اللُّغة بواسطة الموبايل، التحصيل في مادّة النحو في اللُّغة الإنجليزيّة، الاتجاهات..

1. Introduction

During the globalization era, English becomes one of the most used languages around the world. Lots of educational systems in our digital age start looking for new methods of teaching English. Notably, terms like mobile-assisted language learning (MALL) and computer-assisted language learning (CALL) have become the buzz terms in many applied linguistic disciplines as well as many educational systems around the world. Sharples, Taylor, and Vavoula (2010) stated that the term mobile learning (M-learning) describes a new approach to learning that uses handheld devices to assist or enhance language learning experiences.

Godwin-Jones (2011) verified that mobile learning (M-Learning) adds a new dimension to the process of learning English. These capable devices that come up with amazing features such as high-resolution touch screens, virtual keyboards and connectivity to WI-FI network have changed the pedagogy of teaching and learning in the past few years. Due to the increasing popularity of these devices, there is an accelerating pace in developing and designing mobile applications (mobile apps). Using such apps in education would provide the learning process with a new platform that changes the way teachers teach and the way learners learn. Above all, English language learning apps, especially the ones enhanced with multimedia, are being used a lot by many English learners as a supplementary source for learning the language major skills and subskills. Surely, there is a need for the integration between mobile devices and the English language curricula. With Such integration, English language mobile applications would contribute to student's productivity as well as critical thinking skills (Goundar,2011, pp1-3). In the same vein, Steel (2012) emphasized that Successfully integrated English language learning applications could offer students with chances to access, practice and revise the learning material anywhere and anytime as well as to communicate with their peers and instructors with fewer time and place constraints.

The Jordanian Ministry of Education (MOE) by launching many initiatives in education, such as Jordan Education Initiative (JEI) (2003), Education Reform For Knowledge Economy (ERfKE) (2003) and English Interactive Online Initiative (EIOI)(2008) aims at enhancing the Jordanian educational context in general as well as students' skills in English language in particular with the help of information and communication technologies (ICT) (JEI,2010). For this reason, All the Jordanian key national policies concerning the higher education sector have been revised and transformed to foster an effective use of modern technologies in the higher education institutions to achieve life-long learning that can be internationally distinguished for its impact, excellence and innovations. Moreover, to fulfill his Majesty King Abdullah's vision in reshaping the educational system in Jordan and to keep up with the dynamic changes and future demands, the University of Jordan has applied itself to the advancement of our digital age by using modern technologies in more comprehensive teaching and learning contexts. Moreover, it has started an educational reformation in all faculties and all fields by blending many curricula with online E-Learning web pages. These E-Learning web pages and a few mobile applications were developed by a group of experts from King Abdullah II Schools for Information Technology to help students in their learning, reservations and administrations. Furthermore, Almarabeh, Mohammad, Yousef and Majdalawi (2014) examined students' acceptance of E-Learning platform at the University of Jordan and addressed some obstacles that faced University of Jordan (UJ) learners when they used the E-Learning platform such as the absence of well-improved technology devices, software issues, students' poor IT skills, their low-performance level, the information ownership and the high cost of internet service. Furthermore, they pointed out that there is a lack in course-based mobile applications. Although using such applications could open the door wide open for life-long learning, still their use isn't very popular in the educational field.

According to Chou and Jesness (2012) using mobile devices with appropriate content-based applications would help English learners to get through a lot of complications that hinder their learning while using the E-Learning platform such as overbooked language laboratories, security as well as access issues, system failure and some mobility issues. By adopting Krashen 's views (1989) on improving students' acquisition by delivering the language input in manageable and comprehensible pieces, some English language applications deliver their learning contents in mini modular chunks that are supported with short quizzes to assess the learner's comprehension. Thereupon, using such applications would lead for better English language learning experiences that may result in higher gains in the learner's competence as well as performance.

However, Most English language learning applications concentrated on building the learners' vocabulary. Particularly, apps that offer language dictionaries, flashcards, words' recognition games and instant translation are very popular among English learners. In fact, these apps can be highly beneficial for students' vocabulary acquisitions (Steel,2012). Yet, there is a need for English language learning applications that enhance the development of other language skills and subskills. Moreover, Wang and Smith (2013) confessed that there is a shortage in English grammar learning applications.

In short, this study intended to boost awareness among English language educators, teachers, instructors and application developers in relation to the importance of developing course-based applications that could combine both pedagogy and technology in teaching English Syntax I course.

Previous related studies

Aamri and Suleiman (2011) examined the current uses for mobile phones among students in the English language learning process at Sultan Qaboos University. The study aims to explore the students' perspectives, attitudes and the challenges they face while using mobile devices and applications in learning English. The researchers developed a questionnaire that was administered to 100 students. The results of the study showed that using mobile phones among the university freshmen still limited because teachers do not encourage them to use these devices. The two researchers recommended doing research that focuses on changing educators and practitioners' perspectives about using mobile phones in English language learning process.

Steel (2012) investigated students' perspectives on the benefits they get from using mobile apps in their language learning. She used an online survey by which she collected data from 2,114 respondents. The results revealed that students showed a positive response to the use of M-Learning in learning English language. In addition, they said that M-learning fits in their busy schedules. In relation to the use of M-Learning in building their skills in the language domain, most of them responded that language apps help them with vocabularies, reading, writing, grammar and translation tasks. The researcher recommended for further studies to be done on the role of applications in learning English and if there is any variation in their usage pattern and the skills that they targeted. Furthermore, more studies are needed in examining the pedagogical aspects of current mobile application design along with suggesting improvements if they need any.

Sodighi and Soyoof (2013) evaluated the use of smartphones application in learning English language sub skills namely, pronunciation, vocabulary and grammar. The sample of the study includes five (5) Iranian EFL language learners who had previous experiences in using English language learning mobile applications. These participants were interviewed to explore the role of these applications in their language learning. The results indicated that there was a positive impact for using mobile applications on the developments of language skills and sub skills. The researchers recommend EFL teachers to encourage students to use most of the available applications to facilitate their language learning. For instance, Students can use these apps to read e-books, check their pronunciation and spelling, enrich their vocabulary and assess their grammatical knowledge.

In their study, Wang and Smith (2013) investigated the impact of using grammar and reading mobile apps on students 'achievement in these two skills. They used online surveys as well as interviews to collect the needed data from 56 participants, who took part in the study and registered from its beginning till its end. The findings of their study revealed that students 'perceptions on their experiences of using mobile apps to learn grammar and reading skills were positive. The researchers pointed out that the findings of their study indicated that any success of mobile apps learning project should follow some criteria. First, it should provide learners with engaging material that isn't too long or overly demanding. Second, it should ensure certain degrees of teachers' monitoring. Third, it should respect students 'privacy. The researchers hoped that their study would focus the attention of teachers as well as other practitioners in the field to embrace the use of MALL in teaching and learning English grammar subskill and reading skill. They also recommended teachers and app designers to work together to build effective applications that promote students' achievement in reading skill as well as grammar sub-skill.

Azar and Nasiri (2014) explored Iranian EFL learners' perspectives on mobile application efficiency in their listening comprehension. A questionnaire was distributed to the participants of the study, then some participants of the study were interviewed. The results indicated that the experimental group, who used MALL in listening, showed higher gains in their

listening comprehension and they outperformed the control group. The researcher asserted that the results could be useful for teachers and learners. As For teachers, they should change their methodologies in teaching English language listening skill by using M-Learning platform to make their classrooms more learner-centered. As for learners, they should improve their listening skills by listening to the audiobooks that are provided by many mobile applications.

Zou and Li (2015) in their study aimed to explore how mobile apps can enhance English language teaching and learning. The researchers developed a customized-classroom app. The app was integrated with both teaching and learning English inside and outside that classroom. To explore the learner's perspectives on the app, questionnaire and interviews were being used as the main study instruments. The findings showed that M-Learning can be adopted in the formal English classroom context and in the informal context as a supplementary source for learning English. The participants of the study also showed a positive attitude toward using mobile applications for learning English.

AlTameemy (2017) investigated the actual academic use of mobile phones and their applications, such as Duel dictionaries, WhatsApp, Edmodo, Catting, and Educational games, among students and teachers. The study also explored their attitudes toward these well-liked gadgets as learning and teaching tools at Prince Sattam Bin Abedulaziz University and other several universities in Saudi Arabia. The sample of the study was 84 students and 62 faculty members. To achieve the purpose of the study, the researcher developed and distributed a questionnaire by using a google form link. The questionnaire consisted of three main sections. the first section focused on collecting demographic information about the participants. The second section consisted of 19 items that focused on investigating the use of mobile phones for academic purposes. The third section consisted of 15 items that explored teachers and students 'attitudes toward using mobile phones as learning and teaching tools. Results of the study revealed that 95% of the participants in the study said that they use mobile phones and mobile applications for their learning and teaching. Moreover, the responses of the participants showed an average tendency toward the use of mobile phones and mobile applications in learning and teaching. Results of the study also revealed that students consider mobile phones as learning tools that contribute to their self-study. Results also showed that there were statistically significant differences among teachers and students' attitudes toward using mobile phones as learning and teaching tools. While students 'attitudes were more positive, teachers seemed to be less encouraged to the use of these applications inside classrooms because they might be used for cheating or distracting learners. The researcher recommended that more empirical studies based on investigating the impact of using mobile applications in learning actual skills should be conducted. He also recommended holding training sessions on familiarizing teachers with the newest technical and educational tools to meet the demands of the new generation of learners.

Depending on the earlier outcomes of different studies, we can say that most of these results supported the effectiveness of using MALL to enhance students 'gains in different language skills. Others found that students had positive attitudes toward the use of a mobile application in learning English language skills and subskills. Unlike the previous studies the present attempts to investigate the actual impact of a customized- mobile application that tackles major syntactic structures by using extra drills, presentations, flashcards and exercises to help learners to flesh out syntactic major structures, functions and terminology. Also, to explore the students 'attitude toward a customized-mobile application in English syntax 1.

2. Statement of the Problem:

During the last decades, teaching English courses in the School of Foreign Languages at the University of Jordan has been tackled in different methodological lines. Moreover, the School of Foreign Languages at the University of Jordan always prompts instructors to look for new language learning and teaching strategies and up-to-date methodologies. After blending the teaching in some of the Faculty courses with the E-Learning platform, students seem to benefit from the time and place flexibility of these blended courses. Nevertheless, many of these online learners face serious challenges that prevent them from completing these courses successfully. teachers, educators, app designers and programmer start looking for possible alternatives to help students to get over the obstacles that result from the dysfunction in the E-learning platform. In addition, for lots of English majors in the Department of English language at the University of Jordan, Syntax is one of the most complicated subjects that requires being introduced to some useful resources. Such resources may enable them to

understand the fundamental categories of English Syntax with a wide variety of exercise that could help them in maintaining their motivation toward learning English Syntax

Thus, in this study, the researcher created a customized-mobile application that aimed at making syntax 1 course accessible technically as well as cognitively for UJ English majors. The researcher hoped that this application with its various communicative features, built-in content, mini-presentations and drills would help in fostering learner-centered instruction, active communication, critical thinking and collaboration among learners and instructors. More specifically the study attempts to address the following research questions:

1- Are there any statistically significant differences (α=0.05) in the mean scores of UJ English majors' achievement in Syntax due to the teaching method used (customized–mobile application versus Conventional method)?

2- What are UJ English majors' attitudes towards the Customized-Mobile Application?

3. The Significance of the Study

The significance of the study stems from its potential contribution to enabling students to access, practice and revise the English Syntax learning material in more flexible contexts that can go beyond the boundaries of the conventional classrooms. Moreover, the significance of the study emanates from the originality of its intervention; Since the Syntatopia mobile application is the first mobile application at the University of Jordan that tackles the English Generative Grammar.

The findings of the study may be important for instructors and programmer to discover new innovative alternatives that may help students in getting over the obstacles that result from the dysfunction in the E learning platform. Additionally, this study may provide the Ministry of Higher Education as well as the Ministry of Education with the needed data about the effectiveness of using mobile applications in learning English courses so that they might consider sponsoring financially the creation of more customized-mobile applications for teaching English language courses.

1.6. Limitations of the Study

The study has the following limitations:

1- The study is limited to the convenient sample that was purposefully selected. This sample included two sections of English majors who took Syntax 1 course with the same instructor during the Summer Semester of the academic year 2017 \2018 at the University of Jordan.

2- The study was conducted over a period of six weeks during the Summer Semester 2017-2018.

3- The study only investigated the effectiveness of using a customized mobile application on students 'achievement in Syntax and their attitudes toward it.

4- The study was limited to the instruments (Syntax achievement test and the attitude questionnaire) that were used for data collection. Thus, the validity of the results is dependent on the validity and reliability of these two research instruments.

Methods and procedures:

Participants

The subjects of this study consist of two sections of the first and the second year of English majors who took Syntax 1course in the Department of English Language at the University of Jordan during the Summer Semester of the academic year 2017-2018. The two Syntax sections were chosen purposefully because they were taught by the same instructor who agreed to take part in the study. These participants were distributed over two sections: one section was assigned randomly to comprise group (1) as a control group (37 students), while the other section was assigned randomly to comprise group (2) as an experimental group (37 students).

The Study Design

For the feasibility of the study, the researcher used a quasi-experimental design. The researcher randomly divided two Syntax sections into two groups: the control and the experimental. The control group was selected to quantify the impact of the extraneous variables and it was taught by using the conventional method, whereas the experimental group was taught by

using the study intervention, the Syntatopia mobile application. Both groups were pre-tested and post-tested to measure the effectiveness of the study intervention (Syntatopia) on students 'achievement in Syntax. Moreover, to examine the experimental group's attitudes toward using Syntatopia mobile application, a questionnaire was administered and collected by the researcher

3 Variables of the Study:

The independent variable of the study was the teaching method, which has two levels: the Syntatopia mobile application teaching method vs the conventional method. The two dependent variables were the English Majors'achievement in sytax as mearsured by the Syntax achievement test and their attitudes toward the Syntatopia mobile application as mearsured by the questionniare.

Research Instruments :

Two data collection instruments were used to provide data for the present study : an achievement test in Syntax was developed by the researcher. It was used in the pretest and the posttest intervals for both groups (experimental and control). Notably, all the dimensions covered by the test's questions were adopted from the Syntax Course Learning Outcomes (CLOs), which were presented in the Syntax 1 course syllabus that was approved by the Department of English Language In its final version, the total number of test questions was five.

The second data collection instrument was students' attitude questionnaire. It was applied to measure the attitudes of the experimental group toward customized-mobile application. The students 'attitude questionnaire was constructed based on related literature: Thornton& Houser (2005), Chen & Chung (2008), Vandewaetere & Desmet (2009), Manochehri & Sharif (2010) Rhema & Miliszewska (2011), Khabiri & Bagher Khatibi (2013), Alduwairej (2014), Oh, Lee,Park & Cho(2014), Aifan (2015) Meerza & Beauchamp (2017). The final version of the 5-Likert point questionnaire included 29 items distributed as follows :7 items for the motivation to learn English Syntax domain, 6 items for the ease of use domain and 6 items for the collaborative learning experience domain.

To establish the first version of the Syntax achievement test 'and the questionnaire's content validity, a jury of nine experts from both Foreign Languages and Educational Sciences Faculties from three universities (University of Jordan\ The Hashemite University\ Mutah University) were consulted. They were asked to verify the consistency, comprehensiveness, appropriateness as well as the accuracy for the test. Consequently, the jury's comments and suggestions were taken care of by the researcher in writing the final version of the Syntax achievement test

A jury of 10 judges were asked to validate the questionnaire in terms of the extent items addressing students 'attitudes toward Syntatopia application, the items' consistency with their domains, the items 'comprehensiveness, appropriateness, clarity and accuracy. The experts 'main suggestions included: reducing the items in each domain, deleting similar items that measure the same aspects and merging the feasibility domain and the ease of use domain together. As a result, these comments were taken care of in writing the final version of the questionnaire included 29 items distributed into three domains.

Cronbach alpha formula was being used to establish the Syntax achievement test's reliability. The value obtained was (0.73), which was sufficient for the instrument to be used.to establish the questionnaire' reliability, it was administered to 20 English majors' students from the population of the study as a pilot group. Alpha Cronbach correlation coefficient was calculated for the whole questionnaire and for each domain to detect the internal consistency among the respondents 'answers. The obtained alpha values were as follows: the motivation toward learning English Syntax domain (.913), the ease of use domain (.892) and the collaborative learning experience domain (.870). Moreover, the overall reliability of the three domains combined (.963). Therefore, these reliability coefficients were considered suitable for the purpose of the study.

Findings and discussion:

The findings of the study are based on the analysis of the data collected through the main research instruments : the achievement test in syntax and the attitude questionnaire which were developed for the purpose of exploring the impact of

using a customized-mobile application on the achievement of the university of Jordan English majors in English syntax and their attitudes toward it.

A- Findings related to question one: Are there any statistically significant differences (α=0.05) in mean scores of the UJ English majors 'achievements in Syntax due to the teaching method used (Customized-Mobile Application vs. Conventional method)?

Table 1. The means and standard deviations of the students' mean in Syntax pre-posttest due to the teaching method (Customized-Mobile Application (Syntatopia) vs. Conventional method)

Group	N	Pre-test		Post test	
		Mean	Std. Deviation	Mean	Std. Deviation
Experimental	37	24.24	5.398	42.54	3.296
Control	37	22.08	4.815	30.49	5.465
Total	74	23.16	5.195	36.51	7.544

Table 1 reveals that there are differences in the students' mean scores in the pre and post Syntax test due to the teaching method (Customized-Mobile Application (Syntatopia) vs. Conventional method). To determine whether these differences were statistically significant or not at (α = 0.05), One Way Analysis of Covariance (One Way ANCOVA) test was applied, as shown in Table 4.6.

Table 2. One Way ANCOVA results of the mean scores in Syntax test due to the teaching method (Customized-Mobile Application (Syntatopia) vs. Conventional method)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Pre-Syntax achievement test (Covariance)	489.973	1	489.973	35.627	.000	.334
Group	2121.315	1	2121.315	154.244	.000*	.685
Error	976.459	71	13.753			
Total	4154.486	73				

*Statistically significance at (α = 0.05).

Table 2 shows that there are statistically significant differences in the mean scores of students 'scores of both groups in Syntax test regarding the teaching method used. Table 4.6 also reveals that the obtained (F) value for the total degree is (154.244), which is statistically significant at (α = 0.05).

To reveal in favor of which group these differences were, the adjusted mean and standard deviations were obtained. Table 3 presents these results.

Table 3. Adjusted mean scores and standard errors of students' scores in achievement due to the teaching methods

test	Group	Mean	Std. Error
achievement	Experimental	41.989	.617
	Control	31.038	.617

Table 3 shows the adjusted mean scores of the Syntax test total degree was in favor of the experimental group. Thereby, it highlights that the experimental group showed significantly higher gains in their mean scores compared to the control

group. This also indicates that the experimental group performance was better than the performance of the control group in the Syntax test for the total degree.

Chiefly, based on the results of the current study and the statistical analyses obtained, the single most striking conclusion is that the customized–mobile application (Syntatopia) seemed to be more effective in helping students to fulfill the Syntax Course Learning Outcomes (CLOs). Namely, enriching Student's knowledge of the fundamental concepts and the basic terminology of the generative grammar as well as building their abilities in explaining sentences that can be described as ill-formed and well-formed by referring to the syntactic rules and principles. This app also aimed at helping students to determine a word's part of speech using a combination of morphological as well as syntactic criteria. It also aims at enabling them to analyze a grammatical string syntactically and functionally. The app focuses on developing students' skills in representing sentences' hierarchical structures using tree diagramming.

B: Results Related Question two

2-What are UJ English majors' attitudes towards the Customized-Mobile Application (Syntatopia)?

To answer this question, means and standard deviations were calculated for the UJ English majors' attitudes towards the Customized-Mobile Application (Syntatopia). The results are included in the following table.

Table 4.: Means and Std. Deviation of the domains of students 'Attitude questionnaire in Descending Order

No.	Rank	Domain	Mean	%	Std. Deviation	Levels
3	**1**	Collaborative Learning Experience	4.01	80.2%	.794	High
2	**2**	Ease of Use	3.98	79.6%	.840	High
1	**3**	Motivation toward Learning English Syntax	3.98	79.6%	.824	High
		Mean score of Attitudes	3.99	79.8%	.771	High

Table 4 indicated that the average mean for the degree of attitudes towards Customized-Mobile Application (Syntatopia)was (3.99), and as a high level. The average means for domain ranged between (3.98) and (1.01), and with high level. The domain "*Collaborative Learning Experience*" came in the first order with an average mean of (4.01) and a high level. Both *"Ease of Use*" and "*Motivation Toward Learning English Syntax* "domains come next with an average mean of (3.98) for each and a high level.

It can be concluded that the teaching method based on the customized-mobile application (Syntatopia) has significantly improved students' achievement in English Syntax. Namely, the experimental group who used the customized-mobile application (Syntatopia) showed significantly higher gains in their mean scores compared to those of the control group. Moreover, using the customized-mobile application (Syntatopia) raised students' motivation toward learning English Syntax in and out their Syntax classes by offering more relaxed and comfortable setting for learning Syntax that goes beyond the formal setting in the Conventional classrooms as well as a more flexible (learner-centered) environment.

the application offers a new accessible channel for interaction through its WhatsApp group. By using Syntatopia, students are given chances to access, revise and practice Syntax learning material anywhere and at any time as well as to communicate with their colleagues and instructor whenever and wherever they feel the need to do it. In other words, With Syntatopia students were able to comment, question, share or even give feedback to their colleagues. Students also appreciated the application ease of use with its offline working feature as well as extended links for presentations and online exams that aim to develop students' problem-solving skills, communicative skills as well as critical thinking.

This study concluded that using the customized-mobile application in learning English Syntax course would provide the learning process with a new platform that could be used by many English learners as a supplementary source for learning the language major skills and subskills. Notably, these apps can solve lots of E-learning platform dysfunctions including its overbooked laboratories, access issues, system failure and some mobility issues and complications.

Recommendations:

Based on the results of the study, its findings and its limitations, it is highly recommended that:

1- Application developers as well as teachers should cooperate to develop more customized- mobile app related to teaching and learning English syntax.
2- The Ministry of Higher Education as well as the Ministry of Education should sponsor financially the creation of customized mobile applications for teaching English language courses.
3- Other researchers should conduct more empirical studies on investigating the effectiveness of customized mobile applications in learning other English language courses in the Department of the English Language such as Writing 1, Advanced writing, Study skills, Criticism, Shakespeare, Phonetics, Linguistics, England 1-4 courses, American 1\2, Poetry, Novel and Translations.

References

Aamri, A., & Suleiman, K. (2011). The use of mobile phones in learning English language by Sultan Qaboos University students: Practices, attitudes and challenges. *Canadian Journal on Scientific & Industrial Research*, 2(3), 143-152.

Aifan, H. (2015). Saudi Students' attitudes toward Using Social Media to Support Learning. Unpublished Ph.D. dissertation, University of Kansas, USA.

Alduwairej, M. (2014). *Attitudes Towards the Use of Technology Among the College Students Who Study English as a Second Language (ESL).*

Almarabeh, T., Mohammad, H., Yousef, R., & Majdalawi, Y. K. (2014). The University of Jordan E-Learning Platform: State, Students' Acceptance and Challenges. *Journal of Software Engineering and Applications*, *7*(12), 999-1005.

AlTameemy, F. (2017). Mobile phones for teaching and learning: Implementation and students' and teachers' attitudes. *Journal of Educational Technology Systems*, 45(3), 436-451.

Azar, A., & Nasiri, H. (2014). Learners' attitudes toward the effectiveness of mobile assisted language learning (mall) in L2 listening comprehension. *Procedia-Social and Behavioral Sciences*, 98, 1836-1843.

Chen, C., & Chung, C. J. (2008). Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle. *Computers & Education*, 51(2), 624-645.

Chou, C., Block, L. & Jesness, R. (2012). A case study of mobile learning pilot project in K-12 schools. *Journal of Educational Technology Development and Exchange (JETDE)*, 5(2),11-26

Godwin-Jones, R. (2011). Mobile apps for language learning. *Learning and Leading with Technology*, 15(2), pp2-11.

Goundar, S. (2011, December). What is the potential impact of using mobile devices in education, In *Proceedings of SIG Glob Dev Fourth Annual Workshop*. Shanghai, China, December 3, 2011.

Jordan Education Initiative (JEI). (2010). *Annual Report*. Retrieved form https://www.researchgate.net on the 5th of May 2018.

Khabiri, M., & Bagher, M. (2013). Mobile-assisted language learning: Practices among Iranian EFL learners. *European Online Journal of Natural and Social Sciences*, *2*(2s), pp-176.

Krashen, S. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal*, *73*(4), 440-464. Retrieved from https://onlinelibrary.wiley.com on the 5th of July 2018.

Manochehri, N., & Sharif, K. (2010). A model-based investigation of learner attitude towards recently introduced classroom technology. *Journal of Information Technology Education: Research*, *9*, 31-52.

Meerza, A., & Beauchamp, G. (2017). Factors influencing attitudes towards information and communication technology (ICT) amongst undergraduates: An empirical study conducted in Kuwait higher education institutions (KHEIs). Unpublished MA thesis, Kuwait.

Oh, J., Lee, H. K., Park, M., & Cho, Y. (2014). Exploring the effects of tablet pc-based English learning. *English Teaching (영어교육)*, *69*(3), 151-176.

Rhema, A., & Miliszewska, I. (2012). The potential of e-learning in assisting post-crisis countries in re-building their higher education systems: the case of Libya. *Issues in Informing Science and Information Technology*, 9(3), 149-160.

Sedighi, S., & Soyoof, A. (2013). Smart Phone Application: A Superior Tool to Learn a New Language. In *Conference proceedings*. ICT for language learning.

Taylor, J. (2006). What are appropriate methods for evaluating learning in mobile environments? Evaluating mobile learning. In *Big Issues in Mobile Learning, Kaleidoskop Network of Excellence, Mobile Learning Initiative*, Nottingham, 26-28.

Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of computer assisted learning*, *21*(3), 217-228.

Vandewaetere, M., & Desmet, P. (2009). Introducing psychometrical validation of questionnaires in CALL research: The case of measuring attitude towards CALL. *Computer Assisted Language Learning*, *22*(4), 349-380.

Wang, S., & Smith, S. (2013). Reading and grammar learning through mobile phones. *Language Learning & Technology*, 17(3), 117-134.