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Mobile Learning: Its Effect on the Performance of Grade 9 Students on Unreal Conditionals

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Abstract

To improve the performance on English grammar specifically on if-clause statements (unreal conditionals), the researcher implemented Mobile Learning using an intranet set-up to overcome internet connectivity problems. MOODLE server was installed on a laptop while students used their mobile devices to access the interactive content. This study intended to find out whether Mobile Learning improve the performance of students in appropriately using unreal conditionals. Quasi-experimental quantitative design with focus groups for validation was utilized. Results confirmed the poor performance of students on unreal conditionals based on pretest mean scores. Likewise, results revealed that there is a significant difference between the posttest mean scores of the experimental group and control group. Furthermore, the effect of Mobile Learning in improving the performance on unreal conditionals of the experimental group was large. Grade 9 students have difficulty in appropriately using unreal conditionals, but Mobile Learning can be used to overcome this difficulty. Recommendations are forwarded in encouraging the productive use of students' mobile devices in schools by rescinding existing DepEd orders that prohibit their use during class hours and creating guidelines on their appropriate usage.

Introduction

English as a Second Language (ESL) and English as Foreign Language (EFL) learners around the world have always had trouble in the correct usage of conditionals. Several researchers have found out that conditionals are areas of grammar difficulty (Al-Khawalda, 2013; Cheng, 2005; Elturki, 2014; Norris, 2003; Tuan, 2012) and even in the teaching of grammar (Berent, 1985; Murcia, & Freeman, 1999).

The importance of conditionals in communication is substantiated by their existence in many languages (Traugott, Meulen, Reilly, & Ferguson, 1986).

According to Chou (2000), conditional constructions reflect the human capacity to contemplate various situations and to infer consequences on the basis of known or imaginary conditions. Therefore, learning how to use and construct conditional sentences appropriately improves the ability to express reflection, anticipation, and imagination and helps in problem solving, creativity, and critical thinking.

Conditional sentences typically involve a subordinate clause beginning with 'if', which contains a condition or cause and a main clause expressing the result or effect (Traugott et al., 1986). It must be noted that the difficulties ESL/EFL learners encounter in conditionals are largely due to unreal conditionals. With unreal conditionals, verbs in the past form may be used to refer to the present or future time (Gordon, 1985). Comrie (1986) named this behavior as 'backshifting', where a morphological past tense is used to refer to the present or future. This difficulty with unreal conditionals is proven by the findings of Elturki (2014) which revealed that present, past, and future unreal conditionals have been identified by EFL learners in the West Coast of the United States as the most difficult grammar topics.

In the field of language learning and teaching, various studies show that grammar instruction can improve language accuracy of second language learners (Ellis, 1997). The reason for the improvement is explained by the noticing hypothesis (Schmidt, 1990) which states that noticing is a necessary condition for language learning to occur. This hypothesis guided the researcher in selecting Form-Focused Instruction (Ellis, 2001) to improve performance of students on unreal conditionals. Form-Focused Instruction (FFI) is any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic forms that may be classified into structured input, explicit instruction, production practice, and negative feedback (Ellis, 1998). Among second language teaching and learning strategies, 'corrective feedback' (Lyster & Ranta, 1997) has been used by teachers and sought by learners (Sopin, 2015) to improve proficiency in the target language. According to Ammar and Spada (2006), corrective feedback is information provided to a language learner after an error he/she committed. Although Krashen's hypotheses (1982) discouraged error correction, several studies have proven the effectiveness of corrective feedback in the classroom setting (Panova & Lyster, 2002). Likewise, second language learners think that corrective feedback helps them improve their proficiency in the target language (Sopin, 2015). On the timeliness of feedback, some studies show that the more immediate the feedback, the greater the improvement in accuracy (Aubrey & Shintani, 2014; Evans, Hartshorn, & Strong-Krause, 2011; Hartshorn et al., 2010: Lavolette, Polio, & Kahng, 2015).

Meanwhile, Mobile Learning is becoming a very attractive tool for learning. Mobile Learning or M-Learning is defined as learning across multiple contexts, through social and content interactions, using personal electronic devices (Crompton, 2013). It takes advantage of portable devices such as mp3 players, mobile phones, tablets, and laptops to deliver and enhance learning.

In the field of second language learning, the use of M-Learning is popularly referred to by researchers as Mobile Assisted Language Learning (MALL) and has proven to be supportive of learners' second language acquisition (Baleghizadeh & Oladrostam, 2011; Li & Hegelheimer, 2013; Jin, 2014; Najmi, 2015; Viberg & Grönlund, 2012).

In this study, MALL or Mobile Learning was implemented by using MOODLE for the creation and deployment of interactive materials and providing immediate corrective feedback to the learners. MOODLE is the acronym for an open source learning management system called Modular Object-Oriented Dynamic Learning Environment (Brandl, 2005). Among its features, the interactive materials that were utilized in this study were created using the 'Lesson module'. This module allows designing lessons that closely control the learning path guiding learners step-by-step and allowing for advancement, only if sufficient mastery has been achieved (Brandl, 2005). Through questioning, the Lesson module can be used to guide learners to key concepts, test their understanding, deliver relevant responses such as immediate corrective feedback for wrong answers, and provide additional resources, activities, or explanation before they are allowed to advance to the next concept. Another feature of MOODLE that was used to administer the pretest and posttest is the 'Quiz module'. The Quiz module enables the creation and administration of multiple choice, true or false, short answer, cloze or matching type tests that automatically score and item-analyze students' responses.

Related studies on the effect of MALL and MOODLE in improving grammar and their unique

advantage in providing immediate corrective written feedback (Deadman, 2014; Hirschel, 2012; Plomteux, 2013; Robertson, 2008) were the basis for choosing it as an enabling tool to improve the students' understanding of unreal conditionals.

Furthermore, although various studies confirm the effectiveness of MALL and MOODLE to language teaching and learning, both technologies rely heavily on networks that may not always provide very high transmission capacity and may be subject to disturbances of many kinds (Viberg & Grönlund, 2012). This dependence is hugely problematic in the Philippines which was ranked 14th out of 15 Asia-Pacific countries in internet speed (CNN Philippines Staff, 2016) and 100th globally (Olandes, 2016). These limitations affect the feasibility of using the said technologies in language learning in the Philippines. As the various studies on Mobile Learning and MALL show, there are various implementations of Mobile Learning and MALL. In the context of this study, the operational definition of Mobile Learning is accessing and interacting with digital materials on unreal conditionals (a lesson and practice exercises) that provide written corrective feedback in MOODLE using the internet browser of a mobile phone. Additionally, Mobile Learning in this study is also operationally defined as the use of MOODLE in an intranet set-up (no internet connection, just local area network) where MOODLE is installed in a laptop acting as a web server that is connected to a wireless router. Similarly, the learners' mobile phones are also connected to the same wireless router thereby enabling them to access MOODLE even without internet connection.

The results of this study provide empirical evidence of the effectivity of immediate corrective feedback to language learners; thus, providing language teachers an evidence-based approach to improve students' understanding of grammar topics, particularly on conditionals. Furthermore, the study itself, may serve as a practical guide for language teachers attempting to use educational technology in a traditional classroom. The approach that was undertaken to overcome technological difficulties such as internet connection and absence of computer laboratories may provide ideas to language teachers who would like to implement ICT-assisted language learning activities, materials, and strategies. As mentioned in the various researches stated above and the identified gaps among these researches, this study was conducted to address the concerns on the use of technology and its effect on language teaching and feedback-giving. Moreover, the scarcity of local studies on the effect of MALL on grammar teaching and learning of Filipino students in basic education was considered as one of the gaps in local ESL and Language Education research. To overcome the limitation on the internet connectivity, the study implemented MALL and MOODLE without requiring an internet connection, a way no other previous implementation may have done before.

The objective of this study was to find out if Mobile Learning could improve the performance of students in appropriately using unreal conditionals. Specifically, it sought to find out the following: pretest and posttest mean scores of the control group and experimental group; the presence or absence of significant difference between the pretest scores and posttest scores of the control group and experimental group; and the effect size of Mobile Learning to the performance on unreal conditionals of the experimental group.

Methodology

Guided by the noticing hypothesis theory which emphasizes that learners may not notice the formal features of a language during communicative interaction, so the language teacher should raise the learner's conscious awareness of the target language's forms to enhance the learner's accuracy (El-Dakhs, 2014), this study utilized the quasi-experimental quantitative design with focus group for validation. According to Parel, Caldito, Ferrer, De Guzman, Sinsioco, and Tan (1978), a quasi-experiment is a study that includes a manipulated independent variable but lacks important controls, such as random assignment. Non-equivalent control group design was used where there was a control group who took the pretest and posttest but did not receive any treatment before the posttest and an experimental group who was exposed to the treatment (Parel et al., 1978). This design was chosen because the objective of the research is to prove the effectiveness of Mobile Learning in improving performance on unreal conditionals, not to compare it to other teaching strategies.

Sixty students from Grade 9 Science, Technology, and Engineering (STE) Program of Baguio City National High School were identified. Students who had with them at the time of the experiment a working smartphone (Android or iOS), tablet, or laptop and

who signified their willingness to participate in the study were included as respondents. The STE Program students were selected as respondents of the study since the treatment involved independent study and respondents needed familiarity with technology. Further, Grade 9 STE students were selected since the topic on conditionals is part of their curriculum. Being the first school in the region to offer the STE program, Baguio City National High School was chosen as the locale of the study. Respondents from one section were the control group while respondents from another section were the experimental group. There were exactly 30 respondents in each group.

To determine the level of participants' performance on real conditionals, the researcher constructed a 10-item, 20-point pretest. The pretest underwent content validation by three English teachers and was subjected to reliability testing using Cronbach's alpha, with a passing coefficient of 0.820. In this way, the results of the test were used to determine if the respondents did really perform better in real conditionals more than unreal conditionals. Results served as a justification in the selection of the unreal conditionals as a subject in the Mobile Learning interactive activities.

The instrument that was used to gather data needed to answer the first problem statement was a teacher-made 10-item, 20-point test that was tested for reliability using Cronbach's alpha with a passing coefficient of 0.871. The test was used as pretest and posttest for both groups: control; and experimental. The same test and the treatment, an interactive lesson and practice exercises, were subjected to quality assurance on content validity and educational soundness by the Learning Resources Management Development System (LRMDS) office of the Department of Education (DepEd) Baguio City Division Office (Division Memo No. 321, S. 2016- Learning resources that passed the Division quality assurance, 2016). Specifically, the LRMDS used the following guidelines to assess and evaluate the interactive materials: LRMDS Specification and Guidelines for Intellectual Property Rights Management; LRMDS Educational Soundness General Evaluation Checklist; Educational Quality Evaluation Guidelines; Evaluation Rating Sheet for non-print materials; Social content guidelines; and Technical Evaluation Guidelines and Checklist.

In the conduct of the study, a validation of the pretest results administered at the beginning of the school year was conducted. Results showed that there is a low performance on unreal conditionals but high performance on real conditionals. The results revealed that the pretest mean scores on real conditionals for both control and experimental groups are high.

After the pretest, the Mobile Learning was administered during the participants' English period in their respective classrooms. Mobile Learning is depicted through a laptop where MOODLE was installed acting as a web server (Figure 1). This set-up makes the interactive activities available to any device connected to the laptop. For multiple devices to be able to connect to the laptop wirelessly, the figure also shows a wireless router where both the laptop and mobile devices are connected. Lastly, the figure depicts how students are able to access the interactive activities by using the web browser of their mobile devices.

For the experimental group, students were asked to connect to the wireless network that was set-up through the wireless router. The MOODLE server was, likewise, connected to the same wireless network. The students were then instructed to open an internet browser using their mobile devices and type the Internet Protocol (IP) address of the MOODLE server. The students were able to access MOODLE even without internet connection since their devices and the MOODLE server were connected to the same network. Respondents were instructed to create an account in MOODLE, answer the pretest, read and answer the interactive lesson and practice exercises, and answer the posttest all through their mobile devices. After the instructions were given, no other input was given by the teacher. Using independent study as an instructional strategy, the entire learning process was managed by the MOODLE software.

For the control group, the pretest was read and answered by students on paper; however, the posttest was read and answered through their mobile phones following the same procedure done in the experimental group. Unlike the experimental group, the control group was not exposed to the interactive lesson and practice exercise. Despite the absence of a treatment, the control group was necessary to address threats to internal and external validity (Lodico, Spaulding & Voegtle, 2010).

As a form of validation, a focus group was conducted to the respondents of the experimental group to find out the possible reasons for the results

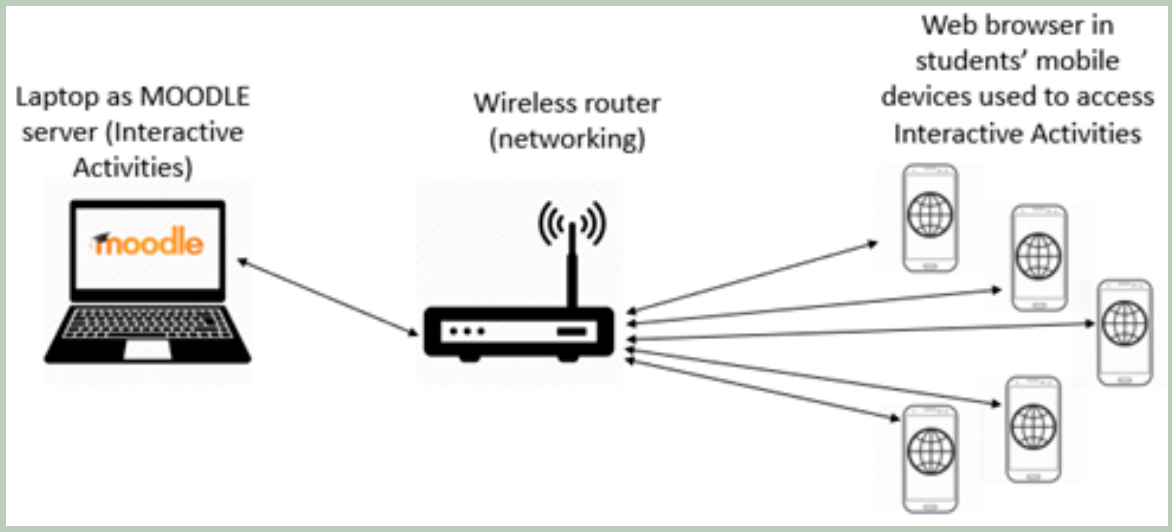

Figure 1. Mobile Learning operation and process

of their test scores.

The results of the pretest and posttest scores in both groups were categorized using a five-point Likert scale with the following descriptions:

Score	Equivalent	Descriptive Equivalent
0-4	1	Very Low (VL)
5-8	2	Low (L)
9-12	3	Average (A)
13-16	4	High (H)
17-20	5	Very High (VH)

The statistical tools used in the analysis of data were mean and standard deviation, independent samples *t*-test, and *eta*-squared. Mean and standard deviation were used in describing the pretest and posttest scores of the students. Levene's (1961) test was used to determine if there was equal variance between the control group and experimental group while independent samples *t*-test was utilized to determine significant difference between the pretest and posttest scores of the experimental and control groups. The Statistical Package for the Social Sciences (SPSS) software was used to compute the statistical tests. Also, *eta*-squared was computed to measure the effect size of Mobile Learning to the performance on the correct usage of unreal conditionals. The following formula was used to compute the effect size:

$$\text{Eta}^2 = \frac{t^2}{t^2 + [N_1 + N_2] - 2}$$

where: N= number of participants
t= t value

The values and descriptions provided by Cohen (1988) were used to categorize the computed effect size:

Values	Descriptive Equivalent
0.2	Small Effect (SE)
0.5	Moderate Effect (ME)
0.8	Large Effect (LE)

Results and Discussion

Pretest and Posttest Mean Scores of Control and Experimental Groups

Results of the pretest scores of both 30 students of control and experimental groups are similar. With a mean of 4.7 for the control group with standard deviation of 3.21 and 4.67 for the experimental group with standard deviation of 2.35, respectively, both groups have mean scores with a descriptive equivalent of low (Table 1).

For example, in this item: "If a student (witnesses,

Table 1

Pretest and Posttest Scores of Control Group and Experimental Group

Group	N	SD	Mean	Descriptive Equivalent
Pretest				
Control	30	3.21	4.7	Low
Experimental	30	2.35	4.67	Low
Posttest				
Control	30	2.92	5.2	Low
Experimental	30	2.57	17.13	Very high

Note: Mean Rating Legend

0-4	Very low
5-8	Low
9-12	Average
13-16	High
17-20	Very high

would witness, witnessed, will witness) _____ an act of bullying, he/she (intervenes, will intervene, could intervene, would can intervene)_____ to protect the victim, unless it will jeopardize his safety and security," where the correct answers are: "…witnessed…could intervene…," only one out of 30 got both answers correctly in the control group while none of the 30 students in the experimental group chose both correct answers. None of the respondents chose to use the past tense for the if-clause even though it was explicitly stated in the directions that the sentences are for hypothetical or imaginary situations. The finding suggests that the two groups have comparable performance on unreal conditionals. This implies that Filipino high school students share the same difficulty on unreal conditionals with other ESL learners worldwide.

The result is similar to the studies of Cheng (2005) and Elturki (2014) indicating difficulties of ESL learners on unreal conditionals. Cheng (2005) concluded that Chinese students of English find the counterfactual (unreal conditionals) to be one of the most difficult aspects of the English language to master. Likewise, Elturki's (2014) research also revealed that EFL students who were enrolled in a language center for teaching English to international students in the West Coast of the United States identified present, future, and past unreal conditionals as the most difficult grammar topics.

The reason for this seemingly universal difficulty with unreal conditionals in English is likely due to the unusual behavior of Verbs when used in hypothetical or imaginary situations. As stated by Gordon (1985), the past is used to represent improbability in the present or future, and the past perfect is used to refer to impossible events that didn't happen in the past.

The same behavior was pointed out by Comrie (1986) who referred to the unusual behavior of verbs as 'backshifting.' In the stated example item from the pretest where none of the respondents chose the past tense, students' responses provide evidence of a lack of knowledge on this behavior of verbs in unreal conditionals.

Furthermore, in the posttest, the mean score of the control group remained low at 5.2 while the mean score of the experimental group improved to very high at 17.13. For example, in this item: "If everyone (would respect, will respect, respects, respected)_____individual differences, we (will not bully, not bullied, not bully, would not bully)_____others," where the correct answers are: "…respected…would not bully…", none among the respondents in the control group got both answers correctly while all the respondents in the experimental group chose both correct answers.

This suggests that the respondents in the experimental group have been made aware of the appropriate verbs to use in both the if-clause and main clause. The improved test scores of the experimental group imply that the treatment had an effect on the posttest results. Awareness of the behavior of verbs in unreal conditionals can be attributed to the interactive activities (i.e., Mobile Learning), which taught the concept through immediate corrective feedback. The results are consistent with the study of Aubrey and Shintani (2014) where students who were exposed to immediate feedback outperformed the control group in writing essays involving hypothetical conditionals. It is also supported by Sagarra and Zapata (2008) who affirm that instant access to error feedback can promote language acquisition. The unchanged descriptive equivalent of the control group in its pretest and posttest results imply that the pretest did not affect the posttest results and threats to internal and external validity have been addressed (Lodico, Spaulding, & Voegtle, 2010).

Difference between the Pretest and Posttest Scores of the Control and Experimental Groups

Table 2 reveals a *p*-value of 0.234 in the pretest and 0.737 in the posttest when mean scores of the control group and experimental group were compared using Levene's (1961) test for equality of variances. With *p*-values greater than .05, these indicate that the difference between the control group and experimental group in both pretest and posttest is not significant. The results suggest that the two groups successfully passed Levene's (1961) test for equality of variances. This implies that test scores between the two groups can be compared using independent samples *t*-test assuming homogeneity of variances.

In other words, the result implies that the control group and experimental group have comparable abilities. This is due to the fact that the general averages of the students were used as basis in assigning learners to different sections at the beginning of the school year. In the Science, Technology, and Engineering Program of Baguio City National High School, students in the Grade 9 level were arranged in descending order based on their general averages. Following this arrangement, advisers alternately assigned students to different sections, ensuring that the general average mean in each section is comparable.

Table 2

Levene's Test for Equality of Variances Between the Control and Experimental Groups

Test	f	*p*-value	Remarks
Pretest	1.447	0.234	Not significant
Posttest	0.114	0.737	Not significant

The pretest mean scores of the control group and experimental group were subjected to independent samples *t*-test, the result of which shows *t*-value of -.046 (Table 3). However, when the posttest mean scores of the control group and experimental group were compared, the *t*-value was 16.813. With a *p*-value greater than .05, Table 3 reveals that there is no significant difference between the pretest scores of the control group and experimental group.

On the other hand, the *p*-value of the *t*-test of the posttest shows that there is a significant difference between the posttest scores of the control group and experimental group. The findings suggest that the experimental group performed significantly better than the control group in the posttest.

The improved performance of the experimental group can be attributed to the interactive activities (i.e., Mobile Learning). The concept of unreal conditionals is taught to the students through a series of questions with a specific immediate feedback based on the selected response. Students interact by choosing verbs in example sentences, then by instantly receiving feedback through explanation and knowledge of whether their selected answer is correct or not. Essentially, Mobile Learning provides self-paced, individualized learning through immediate corrective written feedback.

As verbalized by the students during the interview, they like the feature of Mobile Learning that it immediately tells them if they are right or wrong after they choose an answer and this makes them understand the lesson better. Furthermore, they explained that they do not have to wait for the teacher to explain the grammar rules; Mobile Learning helped them figure out the rules on their own. The results are similar to the studies of Baleghizadeh and Oladrostam (2011), Jin (2014), and Najmi (2015) and whose different

Table 3

Independent Samples T-Test Between the Control and Experimental Groups

Test	N	df	*t*-value	*p*-value	Remarks
Pretest	30	58	-.046	.964	Not significant
Posttest	30	58	16.813	.00⁺	Significant

Note: ⁺- Significant at 0.05 level of significance

implementations of Mobile Learning produced significant differences between the scores of the control group and experimental group. In all these studies, the experimental group outperformed the control group in posttest results. This implies that Mobile Learning is, indeed, an effective way to improve grammar skills, particularly unreal conditionals, of ESL/ EFL learners. This may be attributed to the individualized corrective feedback and immediate written feedback. According to Panova and Lyster (2002), various studies have proven the effectiveness of corrective feedback. On immediate written feedback, Hartshorn et al. (2010) and replicated by Evans et al. (2011) concluded that ESL students who received immediate written corrective feedback to their written outputs showed significantly greater improvement in accuracy compared to the control group which received feedback at a later time.

Similarly, the respondents of this study revealed during the focus group that they learned the concept of unreal conditionals through the feedback from the interactive content. As one of the learners stated, "It made me pay attention to the lesson, and it made me stay interested by showing the correct method. It first lets me answer a question, and explains why it was right or wrong".

On whether the feedback should be written or oral, Sopin's (2015) study revealed that ESL students feel offended or embarrassed when the feedback is done orally in the presence of their peers. Likewise, in this study, students stated that one of the advantages of Mobile Learning was that they were the only ones who knew their answers were wrong. The students expressed that normally, they are ashamed if their answers are wrong but in Mobile Learning, since the feedback was given through the application, they were not bothered. They say they like that because they get to learn from their mistakes without others judging them.

In a teacher-facilitated discussion, their errors are pointed out to the rest of the class. Written feedback ensured that the students avoided feeling embarrassed for wrong answers because their mistakes were only made known to them individually and not revealed to the entire class. This made learning from one's mistakes a more positive experience.

Effect Size of Mobile Learning to the Performance on unreal conditionals of the Experimental Group

Based on the values and descriptions on *eta*-squared by Cohen (1988), Table 4 shows a large effect of Mobile Learning with an *eta*-squared value of 0.83. This implies that when Mobile Learning is used to improve the students' understanding of unreal conditionals, it will result to a highly significant improvement in their performance. Other MALL studies that used *eta*-squared to measure effect size had varying results. In the study of Rahimi and Miri (2014), the impact of mobile dictionary use on language learning produced an *eta*-squared of .545 in favor of the experimental group. In contrast, an *eta*-squared value of .323 was computed in the study of Saran, Seferoglu, and Cagiltay (2012) when mobile phones were used to improve English pronunciation.

The positive results on the effect of Mobile Learning to the experimental group are affirmed by the responses of the students in the experimental group during the focused group discussion. Twenty-nine of 30 students considered Mobile Learning as an effective way to learn grammar topics. Although stated in many ways, the students reasoned that their posttest scores improved due to ease of use (familiarity with the use of mobile phones) and novelty of the strategy. According to one student:

> It is effective, in my opinion, because people, specifically students, are becoming more and more adapted to technology, and this shows them that learning is not just about lecturing and taking down notes, but it is interactive and evolving into something, which fits

Table 4

Effect Size of Mobile Learning to the Performance on Unreal Conditionals of the Experimental Group

N	*t*-Value	*Eta*-Squared	Descriptive Equivalent
30	16.813	0.83	Large

Note: Legend

≤0.2	Small effect
0.5	Moderate effect
≥0.8	Large effect

the modern student's preferences.

Another student said, "It is more interesting reading from a gadget than reading from a book." Further, one student noted the advantage of Mobile Learning when she said, "…with mobile phones, one-on-one learning is possible; with teachers, one to many." Likewise, another student pointed out that Mobile Learning can be used to cope with lessons when one is absent due to sickness.

On the other hand, one of the students who did not consider Mobile Learning as effective, reasoned that it was due to her preference for listening instead of reading. Another disadvantage that was also pointed out was the absence of interaction between learners and teacher.

The focus group revealed that what made Mobile Learning effective was that it was a new strategy using a device, which is more relevant to them. Typically, students are subjected to teacher-facilitated, teacher-directed teaching-learning strategies using printed instructional materials such as books, handouts, and worksheets. The interactive content was new to them and, instead of reading the material on paper, they used their mobile phones. This made the lesson more interesting to them and it kept them focused and engaged. Without Mobile Learning or the use of ICT devices, it is not possible for the teacher to efficiently address individual differences in learning and provide individualized immediate feedback to students. Taking all the findings into account, Mobile Learning is highly effective in improving the performance of Grade 9 students on unreal conditionals. The results may be attributed to its ability to provide self-paced instruction and individualized, immediate, written feedback to the learners.

Conclusions

Based on the findings of the study, it can be concluded that Grade 9 students have difficulty in appropriately using unreal conditionals; however, treatments such as Mobile Learning can be used to overcome that difficulty. Likewise, Mobile Learning can improve the performance of Grade 9 students on unreal conditionals. Lastly, Mobile Learning can highly affect the performance on unreal conditionals of Grade 9 students.

Recommendations

It is recommended that students use the interactive learning activities in this study to improve their performance on unreal conditionals. Furthermore, teachers may adopt Mobile Learning as a strategy in improving performance of students on grammar topics because individualized feedback can be provided instantaneously to each learner. Through this feedback, students can independently learn the grammar concept and test the accuracy of their understanding through automated drills. Moreover, it is also recommended that the DepEd encourage the productive use of students' mobile devices in schools by rescinding existing DepEd orders that prohibit the use of mobile devices during class hours. Instead of a ban, the creation of guidelines on proper usage of mobile devices in schools is suggested. Mobile devices can be used to deliver and reinforce learning both within and outside the school with or without teacher supervision since these devices are always within reach of learners. Likewise, curriculum planners and developers should include pedagogical processes and strategies that detail practical ways of taking advantage of students' personal ICT devices and open-source software such as MOODLE to enhance learning and to achieve curriculum competencies. Finally, second language researchers may conduct similar studies involving the use of other MOODLE activities or mobile applications to test if they are also effective in other grammar topics or other ESL competencies.

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