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in English as a Second Language (ESL) Settings

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Shift in the ESL Classroom: Effectiveness of Mobile Assisted Language Learning (MALL) in English as a Second Language (ESL) Settings

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Abstract

The advancement of the mobile devices has created several benefits to the humankind, extending them in the field of education as well. Since these devices are generally used by the young generation, it becomes hard to be neglected using in the language learning process. The use of mobile applications for various purposes is commonly experienced in the Sri Lankan context as well. Although frequently used in written and oral discourses, phrasal verbs (PVs) are subject to be excluded if the correct use of them is challenging for the English as a Second Language (ESL) learners. Therefore, this research intends to inspect the efficacy of teaching PVs via one of the commonly used mobile applications, since it is prevalent in the society and is a novel method which is different from the traditional teaching done in the ESL classrooms. Thirty undergraduates were selected and divided into two groups of 15 each. Pre-test was given for both groups first and they were not given prior instructions in the subject. They had to use their prevailing knowledge on PVs to complete the test. For the post-tests, traditional classroom instructions were given to the controlled group within one hour and the experimental group was guided via a selected mobile application. Forty popular PVs were used here. The 1-way ANOVA found that the mean marks of the students of the post-test in the experimental group is significantly higher ($p < 0.05$) than that of the students in the controlled group. A significant correlation ($p < 0.05$) was found between the pre-test marks and the post-test marks irrespective of the two methods. Thus, 1-way ANCOVA was also carried out taking pre-test marks as a covariate and found that the adjusted mean marks of the students in the experimental group is significantly higher ($p < 0.05$) than that of the students in the controlled group., Thus, it is recommended that the use of mobile assisted language learning (MALL) in the English Language Teaching (ELT) for ESL setting is an effective, innovative and a novel resource to use as a method of instruction.

Introduction

The use of English language in Sri Lanka has a history of more than 210 years, and it prevailed as "part of the culture and identity of Sri Lanka" all these years (Gunasekara, 2005). In the national school syllabus Phrasal Verbs (PVs) are introduced formally in the school curriculum, from grade 7, starting from simple PVs as "give up, come across and set off". However, considerable problems regarding the use of PVs exist even at undergraduate level even after they were introduced to the students at school level. Thus, this study will inspect the effectiveness of using the aid of technology (which was not considered at school level) in improving the knowledge of PVs of the undergraduates. Teaching many PVs within a given time in a language classroom can cause various issues to the students as well as teachers. Some such problems can be considered as difficulty in retaining them in memory, students losing interest in the lesson and inefficiency in teaching many phrasal verbs due to time constrains. Thus, to overcome these difficulties new methods are needed to be utilized in ESL classrooms. Considering that, in this research, it is hypothesised that using mobile applications in teaching PVs can result positively in the teaching learning process of PVs.

Phrasal verbs (PVs)

Due to the availability of various literature on PVs, a specific definition is found debatable. However, the term verb plus particle combination is commonly used by various researchers (Imrose, 2013). For Quirk & Greenbaum (1973) PVs are multi-word verbs consisting of a verb and a particle and function as single grammatical forms which sometimes give a different meaning than the individual meanings when combined. Fraser (1976) explains them as verb particle combination and the meaning of such a combination cannot be interpreted by combining the meanings of the respective verb and particle. Thomson and Martinet (2012) describe PVs as a combination of a certain verb with either a preposition or an adverb, thus gives a variety of meaning. There are two types of PVs as described below.

Transitive PVs

Transitive PVs are defined by Quirk & Greenbaum (1973) as PVs which can take direct objects. In some cases, the particle that is joined to the verb can either placed preceding the direct object or following the direct object. In the example given by them," *They turned on the light ~ They turned the light on*," the joined particle (preposition on) is used in either way.

Intransitive PVs

Intransitive PVs consist of a verb plus a particle and usually the particle cannot be separated from its verb - *Drink quickly up (Quirk & Greenbaum, 1973).

Mobile learning (ML) and mobile assisted language learning (MALL)

It is inevitable that mobile phone and similar device use has become essential in the contemporary world, making it more of a dominant human need. The young generation specially is involved in using them allocating much of their time in using them. Of the population of 21.54 million in Sri Lanka,

11.34 million are internet users. That indicates, more than half of the population (52.6%) is using internet. Of them 64% web traffic was on mobile phones. It further displays that WhatsApp as the most popular private messaging service accounting for 53%. Thus, it is difficult to neglect mobile phone usage in education.

ML was defined by Geddes (2004) as the acquisition of any form of knowledge or skills via mobile technology irrespective of place and time that "result in alternation of behaviour". Valarmathi (2011) defines MALL as an approach that can be used in language learning which is enhanced with the use of mobile devices which are held in hand. These mobile devices include cell phones/ smart phones (including iPhones and iPads), MP3 or MP4 players and personal digital assistants (PDAs). The advantages of MALL such as easy accessibility, mobility, ubiquity, availability of multimedia facilities, and many other facilities attracts learners and teachers of ELT in utilising them in the teaching and learning process.

Sharples et al. (2006) presents a Theory of Mobile Learning which investigates how (mobile) learning expands "through conversations across multiple contexts amongst people and personal interactive technologies". Based on this theory, this research attempts the effectiveness of mobile learning in the Sri Lankan context.

Popularity of mobile application use in English language teaching

Due to the advancement of technology, mobile phones have become a necessity

to the society, and they play a vital role in communication and entertainment. They are popular in the society due to several qualities as mobility, portability (Jeng et al., 2010), convenient learning, easy collaboration with several number of people (Huang et al., 2010) and their physical characteristics such as size and weight (Alzubi & Muhannad, 2013). Thus, being popular, they have been used in many experiments and research including the field of Second Language Teaching. They are in fact considered as potentially powerful learning tools which can be used even in higher education (Fuxin et al., 2012). In fact, the modes of learning, traditional learning has been extended to E-learning (learning using a computer and an internet connection) and then has now changed into M-learning (learning with a mobile device and wireless communication) which can be widely used even in domestic scenario (Sharples, 2000). M- learning comprises of three constituents – "mobility of technology, mobility of learners and the mobility of learning process" (El-Hussein & Cronje, 2010).

Several examples of engaging mobile tools in the education field for the teaching and learning purposes can be found from literature. Alkhezzi (2016), Jafari and Chalak (2016) and Başal et al. (2016) used mobile technology (WhatsApp as the tool) in enhancing vocabulary of ESL Learners and found positive results in utilising it in the ESL environment.

Students' motivation can be increased using different mobile applications. Zayed (2016) highlights that mobile technology can be used to involve reluctant learners engage more in the classroom and allow them to remain more

focused in classroom activities. Zayed (2016) developed fifteen such activities which can be delivered via WhatsApp.

Jeng et al. (2010) reviewed on the add-on impact of collaborative socially networked mobile learning strategy in comparison with two other pedagogical strategies - context awareness and pedagogical strategy – enhanced learning scenarios. Here they identified several mobile characteristics such as mobility, ubiquitous computing, and portability and recommends the utilization of it in learning strategies. Not only the development but also students' motivation can be increased using different mobile applications. Zayed (2016) highlights that mobile technology can be used to involve reluctant learners engage more in the classroom and allow them to remain more focused in classroom activities. Zayed (2016) developed fifteen such activities which can be delivered via WhatsApp.

Studies conducted in the Sri Lankan context

Considering studies conducted in the Sri Lankan context utilising MALL, there are a few, however, sufficient studies were not conducted on examining the effectiveness of them in the Sri Lankan teaching, learning process. Silva & Alahakoon (2021) explains that Sri Lankan undergraduates have a positive attitude in the usage of mobile applications in distance learning with benefits as easy access and availability of plenty of resources. He further suggests that mobile learning is "supportive of developing all the four language skills". Another study investigated on a theoretical approach to introduce MALL to school leavers and undergraduates of Sri Lanka (Jamaldeen et al., 2015). According to

them, the students showed "strong attitudes" in using m-learning. Thus, and android mobile based application was suggested to be used in the Sri Lankan context for the learners preferred "content-based lessons and audio lessons".

Using mobile applications have positively impacted in the vocabulary learning of Sri Lankan undergraduates as well. Since the learners can use the mobile applications independently, mobile applications can be considered as self-learning tools focussing Mobile-Assisted Vocabulary Learning (MAVL) (Fernando, 2022).

Limited number of studies were conducted in identifying the effectiveness of MALL in the Sri Lankan context, from that no research were found on investigating the efficacy on utilising it in improving PVs. Thus, this creates the research gap in this study. Hence, utilising the use of omnipresent smart devices, this research aims to inspect the effectiveness of teaching phrasal verbs via one of the popular mobile applications designed for communication in the Sri Lankan context which is highly new for the Sri Lankan traditional ESL classrooms, utilising MALL is a shift in the teaching and learning process.

Objective of the study

On view of the above, the primal objective of this research is to identify the effectiveness of incorporating the mobile application – WhatsApp in the second language teaching environments which can create a total transformation in the teaching and learning of ESL environments.

Hypothesis

The null hypothesis to be tested can be written as,
Ho: The mobile applications can be effectively used in increasing the knowledge of PVs.

Materials

To achieve the above objective, forty (40) commonly used phrasal verbs were selected based on two corpora: (i) The Corpus of Contemporary American English (English-corpora.org, 2019) and (ii) The British National Corpus (OUCS, 2014). Pre and post tests were conducted to test the research participants' knowledge on phrasal verbs. As the mobile tool to incorporate in the ELS classroom for the improvement of the knowledge of PVs, WhatsApp is used in this study. WhatsApp is a mobile application which can be installed in mobile phones which run in Android, IOS, Windows Mobile, Symbian, and many more mobile platforms. It allows free messages, unlimited multimedia messages and even calls using internet data connection. Utilising this mobile application gives several additional benefits due to its easy accessibility, user friendliness and its popularity.

Experiment design

Thirty first year undergraduates who are following English as an auxiliary subject for their Bachelor of Information Technology, in a non-state university were selected randomly as the research participants. These 30 students were selected based +on simple random sampling procedure out of 700 students. These students were then randomly allocated into two groups of 15 each namely,

the experimental group and the controlled group considering the experimental design as completely randomized design (CRD).

Experiment procedure

Before giving any instruction, a pre-test on PVs was given for both groups. For the pre-test, students were not given prior instructions in the subject. They had to use their prevailing knowledge on PVs to complete it. The students were then instructed on the PVs using two methods. The experimental group was given instructions on phrasal verbs with the mobile application – WhatsApp and the controlled group was given traditional classroom instructions. The instructions for both these groups were the selected 40 PVs, given in pictures. These pictures included not only texts, but pictures, examples, and definitions. The pictures were sent to the experimental group via WhatsApp and for the Controlled group, the same pictures were discussed in the classroom. The students using the mobile applications were instructed on the selected forty PVs throughout eight days. Instructions were sent to the participants as 5 WhatsApp messages during different times of the day starting at 6 a.m. until 6 p.m. The same instruments were used even with the Controlled group however, only the method of delivery was different – authentic and traditional instructions. After inputting the information for both the groups, they were given a Post-test. The same test paper was used for both tests (Pre-test and Post-Test) to maintain the same difficulty. The test paper was designed to test the knowledge of PVs of the undergraduates. Forty multiple choice questions were included in it. The validity of the question paper was tested by a pilot study,

giving it to another 15 students. The pre-test was given to the selected participants of the two groups with the purpose of identifying their prevailing knowledge on PVs. They completed the test within 30 minutes. The controlled group then continued to have their in-class instructions for a period of one and half hours. The experimental group had their instructions via WhatsApp for the next 8 days.

Statistical analysis

The basic statistical indicators and correlation coefficients were used as basic statistical tools to compare two groups. To test the significance difference between two groups, 1-way analysis of variance and 1-way analysis of covariance (1-way ANCOVA) were carried out using SPSS 26 version.

Basic statistics of the marks

The useful basic statistics of the marks given out of 40, for the two groups before and after giving tests are shown in Table 1.

Table 1.
Useful basic statistics.

Statistics	Controlled Group		Experimental Group	
	Pre	Post	Pre	Post
Mean	20.3	21.5	18.5	24.9
Median	20.0	22.0	19.0	25.0
Standard deviation	4.0	3.8	2.9	2.4
CV (%)	19.7	17.7	15.7	9.6
Minimum	12	15	13	20
Maximum	26	27	23	28

The results clearly indicate that mean, median and maximum have increased after the post-test in both Controlled and Experimental groups.

The mean increase in the Experimental group is from 18.5 to 24.9 resulting the percentage increase of 34.6%. The difference of the mean in the Controlled group is from 20.3 to 21.5 resulting the percentage increase of 5.9 %.

Furthermore, the results displayed in the Table 1 indicated that coefficient of variation of the marks is much lower among the students who used PVs through mobile application. It should also be noted that the minimum marks of the students received for PVs through MALL has increased compared to that of the Controlled group.

Correlation between the marks of the pre and post tests in both groups

It was found that the correlation of the coefficient between the pre-test and the post-test marks in the controlled and the experimental groups are significantly greater than zero and corresponding values are ($r = 0.845$, $p = 0.00$) and ($r = 0.753$, $p = 0.00$) respectively, indicating that there is a significant positive relationship between the post-test marks and the pre-test marks irrespective of the type of the group. The scatter plot for both groups is shown in Figure 1.

Figure 1.
Association of pre marks and post marks of the two groups.
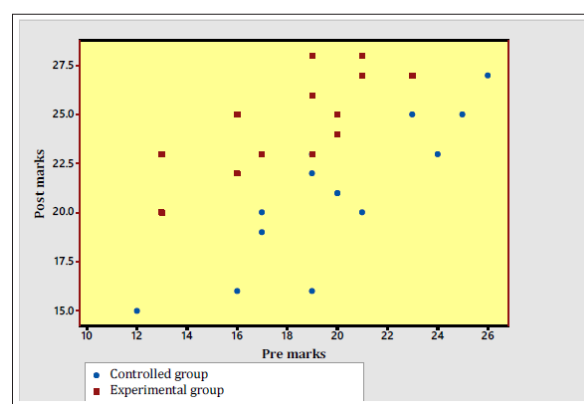
It was found that there is a significant positive correlation (r = 0.562, p = 0.001) between the pre and post values, irrespective of groups which indicates that post-test marks are influenced by the pre-test marks. The corresponding values for control and experimental groups are (r = 0.845, p = 0.0) and (r = 0.753, p = 0.001) respectively.

1-way analysis of variance (ANOVA)

One-way ANOVA was initially carried out to compare the mean marks between the controlled group and the experimental group ignoring the effect of initial marks of the students. The results are shown in Table 2. The means and 95% confidence interval for the means are shown in Table 3.

Table 2.

Comparisons of the means of the two groups: Results of 1-way ANOVA for post-test marks.

Source	Sum of Squares	df	Mean Square	F	Sig.
Group	104.5	1	104.5	11.19	.002
Error	261.5	28	9.3		
Total	366.0	29			

Table 3.

95% Confidence intervals for the mean marks.

Group	Mean	95% Confidence Interval	
		Lower Bound	Upper Bound
Controlled	21.5	19.5	22.8
Experimental	24.9	23.3	26.5

The results in Table 2 confirm that the mean of the experimental group and the mean of the controlled group are significantly different (p = 0.002). This is further justified by the corresponding 95% confidence intervals for the means. Thus, it can be concluded with 95% confidence that the mean mark of the experimental group is significantly higher than that of the controlled group. Therefore, it can be concluded with 95% confidence that using PVs through Mall is significantly beneficial to the students to obtain higher marks than using PVs through traditional approach.

1-way covariance analysis (ANCOVA)

As it was found that there is a significant correlation between the pre-test marks and the post-test marks irrespective of the two groups, it is true that the marks obtained after the use of traditional, in class instruction have some significant impact compared to the initial marks. Therefore 1-way ANCOVA was also carried out to compare the mean of both the groups after adjusting effects due to the Pre-Test marks as the covariate. The results of 1-way ANCOVA are displayed in Table 4.

Table 4.
Results of 1-way ANCOVA.

Dependent Variable:	Post-Test				
Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	276.0	2	137.98	41.38	.000
Pre-Test	171.4	1	171.43	51.41	.000
Group	104.6	1	160.57	48.16	.000
Error	90.0	27	3.34		
Corrected Total	366.0	29			

The results in Table 4 confirms that the adjusted mean marks of the experimental group and the adjusted mean marks of the controlled group are significantly different (p = 0.002) and thus the adjusted mean marks of the experimental group are significantly higher than the adjusted means marks of the controlled group. The adjusted means for the experiment group (24.5) is significantly higher than the adjusted means of the controlled group (22.2).

Conclusions and Suggestions
Conclusions

This study confirms the effectiveness of using mobile applications as a resource in the English language teaching and learning process of Sri Lanka due to several reasons. Since the mobile phones are omnipresent, they cannot be ignored utilizing them in the teaching and learning process, thus, they must be used in the language learning classrooms. Participants in this study improved their knowledge on PVs irrespective of the mode of input used – Controlled group, in class teaching and the Experimental group, Mobile Assisted Language Learning (MALL); however, based on the post-test results, participants of the Experimental group who learned PVs through the selected mobile

application achieved significantly better than the other group who learned through traditional, in class discussion. The regular conversations between the teacher and the learners in the WhatsApp conversation during the 8 days, decreased the coldness between the two parties and encouraged the learners to be engaged in conversation with the teacher. Thus, this study also confirms that the usage of mobile applications in the ESL classroom to teach vocabulary items as PVs can affect positively, if used after careful planning. It is recommended to carry out large scale studies including large number of participants to understand more strengths and weaknesses of the use of mobile applications in the teaching/ learning process.

Suggestions

This research focussed only on a minor subject area of English language – Phrasal Verbs (PVs). Mastering PVs support the learner's vocabulary development not the entire language improvement. Thus, more research needs to be conducted in other areas of English to identify how MALL assists in overall language development of the learners. Apart from that, this research does not focus on the errors and the types of errors that the

learners make even after the instructions were given using MALL. Therefore, further research must be conducted to identify the different types of errors and the reasons for such errors committed by the ELS learners.

Acknowledgement

References

Alkhezzi, F. (2016). The Impact of Mobile Learning on ESP Learners' Performance. *The Journal of Educators*, 13(12), 73-101.

Alzubi, M., & Muhannad, S. (2013). Using Mobile-Based Email for English Foreign Language Learners. *Turkish Online Journal of Educational Technology*, 12(1), 178-186.

Basal, A., Yilmaz, S., Tanriverdi, A., & Sari, L. (2016). Effectiveness of Mobile Applications in Vocabulary Teaching. *Institute of Education Science*. 7(1).

Chan, N. N. (2016). An Investigation into Everyday Language Learning using Mobile Applications. Conference MIT LINC, USA.

Corpus of Contemporary American English (COCA) (2019). English-Corpora. org. https://www.english-corpora.org/coca/.

El-Hussein, M. O., & Cronje, J. C. (2010). Defining Mobile Learning in the Higher Education Landscape. *Journal of Education Technology Society.,* 13, 12-21.

Fernando, W. W. A. P. H. (2022). Effectiveness of Mobile Assisted Vocabulary Learning Applications (MAVL) as a self-learning tool for ESL learners in Sri Lanka. *Sri Lanka Journal of Social Sciences and Humanities*, 2(2), 69. https://doi.org/10.4038/sljssh.v2i2.74.

Fraser, B. (1976). The verb-particle combination in English. New York: Academic Press.

Fuxin, A. U. (2012). Mobile/Smart Phone Use in Higher Education. Retrieved August 22, 2022, http://swdsi.org/swdsi2012/proceedings_2012/papers/Papers/PA144.pdf.

Geddes, S. J. (2004). Mobile learning in the 21st century: benefit for learners. http://hdl.voced.edu.au/10707/383787.

Gunasekara, M. (2005). The Post Colonial Identity of Sri Lankan English. Katha Publications.

Huang, Y. M., Hwang, W. Y., & Chang, K. E. (2010). Guest Editorial – Innovations in Designing Mobile Learning Applications. *Educational Technology & Society*, 13 (3), 1-2.

Imrose, I. (2013). Phrasal Verbs: A Problem for EFL/ ESL Learners and Suggested Solution. *Thammasat Review*, 16(3), 109-118.

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Jafari, C., & Chalak, A. (2016). The Role of WhatsApp in Teaching Vocabulary to Iranian EFL Learners at Junior High School. *English Language Teaching*, 9(8), 86-92.

Jamaldeen, F., Ekanayaka, Y., & Hewagamage, K. (2015). A Theoretical Approach to initiate Mobile Assisted Language Learning among school leavers and University Students of Sri Lanka. *ACIS 2015 Proceedings*.: https://aisel.aisnet.org/acis2015/39/ [Accessed 28 October 2022].

Jeng, Y. L., Wu, T. T., Huang, Y. M., Tan, Q., & Yang, S. J. H. (2010). The Add-on Impact of Mobile Applications in Learning Strategies: A Review Study. *Educational Technology & Society,* 13(3), 3-11.

Kroch, A. S. (1979). Review of The Verb-Particle Combination in Enlish, by B. Fraser. *J of Language*, 55(1), 219-224. https://doi.org/10.2307/412527.

Liu, D. (2011). The Most Frequently Used Phrasal Verbs in American and British English: A Multicorpus Examination. *Tesol Quarterly*, 45(4), 661-668.

Mccarthy, M., & Felicty, O. (2007). English phrasal verbs in use. Cambridge University Press.

Nisbet, D. (2013). Enhancing ESL Vocabulary Development through the Use of Mobile Technology. *Journal of Adult Education.* Vol(1),1-7.

OUCS (2014). British National Corpus. [online] Ox.ac.uk. http://www.natcorp.ox.ac.uk/.

Quirk, R., & Greenbaum, S. (1973). A University Grammar of English. London: Longman.

Sharples, M. (2000). The design of personal mobile technologies for lifelong learning. *Computers and Education*, 34, 177-193.

Sharples, M., Taylor, J., & Vavoula, G. (2006). A Theory of Learning for the Mobile Age. telearn.archives-ouvertes.fr. https://telearn.archives-ouvertes.fr/hal-00190276/en/ [Accessed 28 October 2022].

Silva, N. A. L. D. R., & Alahakoon, A. M. Y. S. (2021). A Study of Using M-Learning Approach to Enrich English Language Teaching: With Special Reference to G.C.E. Advanced Level Students in Kalutara Education Zone. *Sri Lanka Journal of Social Sciences and Humanities*, 1(2), 175. https://doi.org/10.4038/sljssh.v1i2.48.