



## THE USE OF MOBILE APPS TO ENHANCE READING SKILLS OF LANGUAGE LEARNERS: A REVIEW

*Review paper*

C. Kalyan Chakravarthy<sup>1</sup>, Sunitha. V.<sup>2</sup>

<sup>1,2</sup> School of Social Sciences & Languages, Vellore Institute of Technology, Vellore, Tamil Nadu, India

Received: 2022/10/11

Accepted: 2022/12/11

### ABSTRACT

*Reading activities are generally compromised owing to the time constraints in the classroom. As an outcome, students' inability to understand a passage has an adverse effect on their enthusiasm and confidence despite knowing that reading acquisition plays a crucial role in language learning. In this regard, mobile apps seem to be the powerful support for acquiring reading skills and interpreting comprehension which are the two challenging aspects of language learners to be knowledgeable enough. They also enrich readers with vast opportunities and provide a stress-free environment that aids them to improve their reading skills. The paper reported here explores the effectiveness and the role of mobile applications in acquiring reading skills. Reviewed articles and dissertations used in this paper focus on the development, analysis, examination of the mobile apps for enhancing reading skills. The paper also explores the research design, methodology and theory that support the usage of chosen mobile apps for the research. This review article concludes that reading skills can be enhanced better through mobile apps than that of the conventional academic setting.*

**Keywords:** *reading activities, reading acquisition, mobile apps, comprehension, stress-free environment*

### INTRODUCTION

In the new era, MALL (Mobile Assisted Language Learning) has become an academic technology. It provides complete and regular access to applications and systems that assist informal and formal acquisition. The Learning environment has moved from the conventional classroom and stretched its horizon. MALL contains many striking characteristics that are highly valuable for educational institutions and universities. It has convincing features like rich educational content, immediate access to resources, feasibility which supports collaborative and independent acquisition and these provide effective learning atmosphere and improve professional skills.

“Mobile devices cover cell phones, smartphones, PDAs, tablets, etc. All of these can be used for MALL. Currently, the majority of MALL activities seem to make use of mobile phones.” (Kukulka-Hulme & Shield, 2008; Mehta, 2013). This statement asserts that the latest methods of learning are simplified with the help of smartphones, PDAs, tablets, etc. which helps to have quick access to learning within varied settings. Social networks and virtual groups share information, ideas, news and so on. In the present era, students widely connect to these social networks through smart phones and its applications. By imparting social media in mobile

**Correspondence to:** C. Kalyan Chakravarthy, Ph.D. Research Scholar, Department of English School of Social Sciences and Languages, Vellore Institute of Technology, Vellore  
Sunitha V., Associate Professor, Department of English School of Social Sciences and Languages, Vellore Institute of Technology, Vellore  
E-mail: kalyanchakrvarthy.c2017@vitstudent.ac.in, sunitha.venugopal@vit.ac.in, Tel: +919848599164

learning a self-directed learning environment that includes additional engagement, interaction and collaboration can be maintained. Resources and tools meant for teaching and learning can be shared and students can access the same instantaneously. "Mobile devices were expected to encourage innovation in education and increase high-level abilities." (Sung, Chang, & Yang, 2015). It is well known from the research of Burston, J. 2013. that many publications on the concept 'MALL' have been concentrating on the reports to include the same into various aspects of learning a language but there is a very limited report regarding learner-centred m-learning activities in language. Reading is one of the important productive skills in learning a language. It is the capability to relate with a text and comprehend the words. Since we are in an era of technology and every student uses smart phones, it can be well utilized to teach reading skills. It is the need of the hour to explore the appropriate applications to improve reading skills. The present article is based on the literature review of various sources on the topic chosen in available databases. And also, on the categorization of apps to assist learners in selecting the best apps to use to enhance their reading skills. The main purpose of this review paper is to examine original, peer-reviewed English research articles and to assess the use of mobile apps to enhance the reading skills of language learners. Thus, the objectives of this paper are as follows:

- To identify the apps which are more effective and helpful for language learners
- To open up new dimensions in learning/teaching methods for language learners
- To identify whether students can show significant progress in reading skills by using mobile apps

#### *A. Importance of mobile apps in acquiring reading skills*

A new market of software called apps is quickly emerging with the evolutionary growth of the smartphone. Smartphone users can choose and download mobile apps from application stores like Play Store (Google Play) and App Store (Apple's). There are only a few studies on the investigation of mobile applications (Arús-Hita, Rodríguez-Arancón, & Calle-Martínez, 2013; Kim & Kwon, 2012). Research by Kim and Kwon (2012) presented an insightful review on the efficiency of 87 mobile applications in learning language. Their investigation is on different features of mobile apps, its strengths and weaknesses in

order to utilise them for successful MALL. The result of their research states that the approachability and feasibility of the apps are important for student-centred learning. At the same time, Kim and Kwon advised that the applications should be developed using different learning opportunities.

#### *B. Guidelines for English-Learning Apps*

There is no doubt that learners are gradually turning to online resources for learning as the accessibility of apps on mobile devices have become so easy. "Online resources bring an easy way to knowledge that is useful and relevant." (Nichols, 2003). There is no doubt that learners are gradually turning to online resources for learning as the accessibility of apps on mobile devices have become so easy. While encouraging students to use mobile apps for learning English, it is good to consider the benefits of apps that can help learners to compare and organize various sources as part of their assignments and assessments. Since internet has its own problems, the information available on mobile applications can't be regulated for the accuracy or quality like the similar information available on newspapers, T.V programs or books. The guidelines by Tomlinson (2010) about English Resources are as follows:

1. English materials should include interesting and engaging tasks.
2. English materials should contain enough spoken and written text.
3. Learners should be exposed sufficient examples of language in authentic use.
4. Language input in materials should be conceptualized.
5. English materials should include activities that provide critical thinking and encourage learners to visualize.

The guidelines by Howard and Major (2004) about Online English Resources are as follows:

1. Online English resources should have appropriate instructions.
2. Online English resources should stimulate interaction and be generative.
3. Online English resources should be attractive and flexible.
4. Learners are encouraged to develop learning skills and strategies when they use online English resources.
5. Online English resources should link to each other to develop a progression of skills and understand the items in a language.

In addition to the above guidelines, the updation of applications is one of the most needed criteria.

When self-regulated learner uses his/hersmartphone to acquire English language skills, updation turns out to be more significant. Since English resources keep updating almost every day, a great amount of updation can hold the learner's money, energy, time, etc. in the process of learning English.

### *C. Reading is an Inter-Disciplinary Skill*

Reading is a difficult practice that includes process of communication between the reader and the author. It is one of the important skills to be acquired for language proficiency. Students need to comprehend huge amount of data available in textbooks and on the internet as a part of their academics. Besides poetry and novels in the language classroom they need to interpret a scientific report and write research papers. It is sad to note that students hesitate to read. "Reading comprehension skills are particularly critical for students as they progress in school and the focus becomes no longer on learning to read, but rather reading to learn." (Lapp et al, 2008; Ness, 2009). Thus, students who are poor in reading cannot do well in writing and speaking. Therefore, it is necessary to suggest them with effective mobile apps for reading in order to help them to improve their reading skills. There has been a rising demand for various methodologies that focus on cultivating reading skills. One of them is using a mobile app. "Apps available for use in language learning and teaching has become very diverse and become central to language practice." (Motteram, 2013). There are umpteen number of mobile apps available in both Play Store and App Store to get the hold of reading skills. All that to do is to open the store and click on search option and type whatever is needed and select the one from the gigantic list and finally install. Once the installation process is done, the app starts working in agreement with its operating system to help the user's need. Many apps come with user-friendly services in order to cope up with the competitive world. For example, Reading TOEFL preparation tests app benefits the user to practise 'reading comprehension'. One can check one's skill in 'Part A: Vocabulary' or 'Part B: Reading Comprehension' and later check if one's answer is correct or wrong. Part A helps to learn synonyms, choose the right word, fill in the blanks, make a collocation, word substitution, and choose the best word. Reading skills test can be taken by attempting simulation test. Likewise, there are numerous apps with multiple features that cater the users to develop

proficiency in language according to one's convenience. Learning a language through mobile apps is entertaining, economical and timesaving.

### *D. Mobile apps for improving reading skills*

After the relevant literature was reviewed, the researcher consulted the following guidelines to categorise the mobile apps for improving reading skills:

1. The selected apps should have updation. It means that the learning materials on the apps are updated periodically.
2. The selected apps must be downloaded freely into users' computers and mobile phones.
3. The chosen apps must have a high popularity rate and practical applicability.
4. The materials or contents supplied by the selected apps must meet the criteria for English resources (Tomlinson, 2010) and the guidelines for online English resources (Howard & Major, 2004).
5. Few advertisements and games are included in the apps. No use for commercial purpose.

Based on the researcher's exploration and investigation, the reading apps namely Reading Comprehension Test, Reading TOEFL preparation Tests, Reading Comprehension GRE Test prep & practice and Speed Reading – brain training were chosen as the best apps to enhance the reading skills. These apps were selected from the top-ranking popularity and they were all chosen according to the above-mentioned guidelines. The details of these reading apps are as follows:

#### *1. Reading Comprehension Test*

This app provides different tests on English reading. Learners can practice comprehension passages at different levels and attempt the reading tests. This app helps learners to examine outcomes of all their reading tests in a very simple way.

#### *2. Reading TOEFL preparation Tests*

This app helps the learners to improve their TOEFL score. By using this application, learners acquire vocabulary, grammar, etc. With this app, one can study for free with the questions available and obtain the score reports with correct answers.

#### *3. Reading Comprehension – GRE Test Prep & Practice*

With this simple app, one can acquire the basics of reading comprehension, practice questions, attempt tests, assess one's performance and learn more about one's strengths and weaknesses in understanding comprehensions.

#### 4. *Speed Reading – brain training*

This app can help to increase one's reading speed to the expected level without relying on any expensive courses. The simulators available in this app will help the learners to remember words and numbers quickly, improve the ability to concentrate, enhance the perception and improve the speed of reading.

### METHODOLOGY

A thorough review of relevant literature on mobile applications is necessary to gain knowledge on how to develop reading skills. This study not only studies the related research, but also validates the exceptionality of the work done in the field. The literature review is centered on acquiring reading skills, its methodology and the tools used for research progress with reference to mobile technology apps. Kuldeepsinh J. Sisodiya (2017) in his thesis titled *Mobile technologies to enhance communication skills of first year engineering students* examined that the mobile phone is an effective instrument to enhance writing and speaking skills of first semester engineering students. He picked his sample by random sampling method, without any elimination or selection process. Data was collected through questionnaire, pre and post-tests. He inferred that mobile device can be an effective tool to successfully learn the language with simple applications. The result recommended that MALL has considerably positive effects on the test scores of the students. Besides, students have shown positive attitudes in preferring MALL instead of CALL to develop their writing and speaking skills. Lakshmi K (2017), in her research paper titled *A study on the effectiveness of M-learning in developing English speaking skills of Rural Engineering students in Vellore district* states that rural engineering students feel difficulty in expressing their views in English language and they are very reluctant to speak in English owing to lack of confidence, fear of wrong utterances and low self-esteem. To validate her research, data collection tools like personal information questionnaire, Aptis speaking assessment tool by British Council were used. Through her research, she has found that the utilization of m-learning inside and outside classrooms would enable the learners to use English sentences correctly in spoken form. Mousa mahmoud abu laban (2017) in his thesis *The effectiveness of using mobile learning in developing eleventh graders' English grammar learning and motivation for English* applied experimental

approach with 70 EFL male learners as sample for his study. He designed and used instruments like Achievement Test and Motivation Scale to achieve his purposes of the research. Statistical techniques such as T. Test, Spearman correlation, Pearson correlation coefficient, Split-half, Alpha Cronbach techniques and Eta square were used. The result achieved revealed statistically significant differences between the control and the experimental groups, where the favor is on the experimental group. His research suggested the need of developing Mobile learning apps in teaching and learning English grammar to get better student outcomes. Parmar (2015) in his thesis entitled *Acceptance and effectiveness of mobile learning in teaching and learning of English language- A Study* asserts that mobile technology is accepted by language learners to a great extent and can be effectively used to complement classroom face-to-face English language teaching and learning. He administered IT awareness questionnaire to gather students' demographic information and to know their extent of awareness in operating mobile devices and using mobile applications. He used two distinct models, UTAUT 1 and UTAUT 2 to identify the acceptance of information Technology. The researcher used online platforms namely Edmodo and WhatsApp to share texts, lesson plan, and questionnaires with students and teachers. To know the student's perception on mobile learning, data collection tools like telephonic interview, journals and reflective reports were administered. Ashley Yang. (2015), in his study *The effects of reading app usage on reading comprehension* tried to find the relationship between the use of reading apps and the reading comprehension. iPad was used as a research tool for a five-week long reading enrichment plan to analyse how this would affect the reading abilities of students. The app named 'Booksy' was chosen and it was found that it had negative effects on reading comprehension and giving instructions to enhance reading skills through app was not supported. Another research by Qiaochu Liu and Xuan He (2014), *Using mobile apps to facilitate English learning for college students in China* mentions that they experimented with 15 undergraduate students in China. They found that they are enthusiastic to use mobile apps to acquire English knowledge with self-regulated learning approach rather than traditional learning approach. They also researched the apparent online resource that helps the students to develop their listening, speaking and reading skills.



Data collection tools like survey questionnaire, semi-structured interview and experiment were administered in their study.

Finally, based on the outcome of the experiment, they provided useful instructional strategies for undergraduate students to develop self-learning of English language skills.

Hao et al. (2019) conducted research titled *An evaluative study of a mobile application for middle school students struggling with English vocabulary learning* and examined how m-learning can help weak students to develop English reading skills. They found that students, who are weak and side-lined frequently in the class, become capable, show significant progress and fetch good result by the usage of mobile applications. Jamaldeen et al. (2018) in their study *Design guidelines for creating mobile language learning applications* consider mobile learning as one of the main areas of education that is still expanding. They conducted an experiment on a mobile learning application and asserted that the users' attitudes towards m-learning were favourable. However, their findings imply that m-learning would be more efficient when used as a supporting tool rather than as the main tool. Kalyan Chakravarthy. C, Sunitha. V. (2020) in their work *An exploration of mobile apps to enhance the feasibility of Mobile Learning in engineering students for effective Reading Skills* explored the effectiveness of obtaining reading skills using mobile apps against the conventional method of developing reading skills. Twenty first-year Engineering students were chosen as samples for this study, who were further divided into an equal number of experimental and control groups in a random manner. The data was gathered through questionnaire, pre and post-tests. The mean score had a significant difference. The score of experimental group ( $M = 17.8$ ,  $SD = 0.93$ ) was higher than that of control group ( $M = 14.1$ ,  $SD = 0.87$ ). The data collected and the results indicated that the experimental group considerably outpaced the conventional group in their knowledge of understanding the reading comprehensions. Klimova (2019), *Impact of mobile learning on students' achievement results* states that mobile apps help in developing language skills. It helps to recollect new list of vocabulary and increases students' motivation. He found that using mobile apps can boost students' confidence level and involvement. Naderi and Akrami (2018) in their research titled *EFL Learners' reading comprehension development through MALL: Telegram groups*

*in focus* studied on the effects of reading comprehension with the mode of Telegram (on line Messenger). Their study states that the students choose smartphone as the best instrument for reading and analysing short texts since the online instruction has become prevalent. Elfeky and Masadeh (2016) in their study titled *The effect of mobile learning on students' achievement and conversational skills* examined the impact created by mobile devices on the students' achievements and improvements through quasi-experimental approach and observation. They acquired positive results and recommended mobile phone with relevant apps usage in classrooms. Leis et al. (2015), in their study *Smartphone Assisted Language Learning and Autonomy* investigated the effects of using smartphones in the classroom where students' autonomy plays a vital role. They found that the learners who are motivated to utilise smartphones in classroom learned to a greater extent with more autonomy compared to the students who are restricted to use smartphones in classroom. Their study suggests that students should be given freedom to learn language by using smart phones. Another study by Ghada Itayem (2014) entitled *Using the iPad in Language Learning: Perceptions of College Students* states that the learners appreciated the technology as very useful in learning. The study was conducted to examine the students' acceptance of iPad technology in their integrated language learning courses namely Listening, Speaking, Reading and Writing. To achieve this purpose, the Total Acceptance Technology (TAM) was applied in the research. This research set up a structural equation modelling approach to represent the casual relationships among the model factors. The result of this study indicated that the iPad was observed to be useful and easy to use in language learning courses. Vinu (2011) emphasizes the concept of establishing mobile learning technologies to make the process of learning efficient and productive in his dissertation titled *Towards pervasive mobile learning – the vision of 21st century*. Suvarna Ragini (2010) in her thesis *Exploring online reading strategies for improving reading skills at secondary school level* states that there is a need to make learners involve in more exciting method of reading instead of preparing them routinely for content-based examinations. Her study was carried out for an academic year where students were exposed to online reading along with regular curriculum. The data was collected through interviews, personal interaction, questionnaires and direct observation reports of the online reading sessions. She evaluated reading tasks

based on the four constructs namely vocabulary recognition, inferential comprehension, critical comprehension and over all task performance. Her study concluded that the students were able to enjoy doing online reading tasks more than their academic lessons, as these helped them acquire new knowledge and skills in a more enjoyable manner. In connection with the present study, there are a few review articles which give more insight into the mobile apps and their uses. The review article by Jaroslav Kacetl and Blanka Klímová, (2019) *Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education* assessed various journal articles and found that mobile learning has become an important characteristic of education since it is a good opening for foreign language learning. His study focused on learner's cognitive capacity, motivation, self-sufficiency and self-reliance to reach their study goals. Wright et al. (2013), in their study *Using E-readers and Internet resources to support comprehension* concluded that there should be an inclusion of electronic readers in contemporary classrooms. Besides, they argued that public libraries always provide an alternate access to digital resources where literary assets may not be available within the realm of the brick-and-mortar school building. Ali, Jason. (2017) in his dissertation titled *Mobile device use in student learning process* examined various ways where students utilize the mobile devices and services of their institution and acknowledged possible methods in which mobile devices can be used to assist the learning process of students. In his study, he has laid the emphasis on the Moodle application called 'Reppu' which can solve several issues faced by students while using the same. Another study by Ramya, G., and Madhumathi, P. (2017) *Review on Use of Mobile Apps for Language Learning* states that umpteen numbers of resources can be provided by mobile devices where learners are exposed to reliable material such as English songs, English news, Live streams and Radio. They classified the mobile apps based on primary, secondary and territory learners. This classification is meant to make the learner choose the relevant app that satisfies their learning needs.

## RESULTS AND CONCLUSION

This review paper is proposed to study the use of mobile apps to enhance the reading skills of undergraduate students. After going through the relevant thesis and scholarly articles, the researcher found that the teacher, being a language facilitator

in a classroom, has to be open-minded to motivate the learners in using mobile devices and language learning apps. Since mobile devices and their uses are becoming inevitable, services like broadband, WIFI and further internet services have to be assisted in handy to the learners at the institution (both outside and inside the classrooms). Being updated in knowing the various apps availability on the internet and their effectiveness, trainers can make the language learning easier and the same can be made applicable to the learners. Students have to be motivated to stay connected and share information on language learning apps with one another. With reference to various studies examined by the researcher, it is observed that the mobile apps meant for students centered approach and activities conducted undoubtedly motivate the learners and gives better results. Students need to be taught how to use these mobile apps efficiently. Teacher's intervention and effective guidance will encourage the learners in developing reading comprehension skills. Findings show that these mobile apps play an effective role in teaching learning process and are able to give proper insights to the language trainers and learners. Yet, to attain the full benefit of these apps, trainers are suggested to design innovatively, plan cautiously and implement thoughtfully keeping in mind the learners' interest and motivation in acquiring reading skills. However, the apps chosen should consider the aspects like learners' thinking capacity, interest to read, freedom and openness to enhance their comprehension better.

## RECOMMENDATIONS

In the prospects of communication and education, interactive multimedia has grown as a big opening. Development in technology has vividly enriched the present academic world. Further, opportunities to alter the conventional academic setting for mobile learning have been shaped by the wide use of mobile technologies. Self-regulated learning through mobile apps definitely caters the possibilities to acquire different language skills. "Student-centered Learning represents both a mindset and a culture within a given educational institution and is a learning approach which is broadly related to, and supported by, constructivist theories of learning." (Attard, Iorio, Geven & Santa, 2014). Self-regulated learning allows students to choose their own ways to learn, assess and decide according to their needs. The limitations of this review contain various methodologies conducted in studies by the researchers, samples chosen and the examining of different language skills.

The future research can be focused on the use of mobile apps to enhance all four language (L, S, R, W) skills from the perspective of student-centered learning.

## REFERENCES

- Ali, Jason. (2017). Mobile device use in student learning process, *Ph.D. dissertation*.
- Arús-Hita, J., Rodríguez-Arancón, P., & Calle-Martínez, C. (2013). A pedagogic assessment of mobile learning applications, in *Proc. ICDE*
- Ashley Yang. (2015). The effects of reading app usage on reading comprehension, *Ph.D. dissertation*.
- Attard, A., Iorio, E. D., Geven, K. & Santa, R. (2014). Student-centred learning SCL Toolkit.
- Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994-2012, *Language, Learning & Technology*, 17(3), p. 157.
- Elfeky, A., & Masadeh, T. (2016). The effect of mobile learning on students' achievement and conversational skills, *International Journal of Higher Education*, 5(3), pp. 20-31.
- Ghada Itayem. (2014). Using the iPad in Language Learning: Perceptions of College Students, *Ph.D. dissertation*.
- Hao, Y.; Lee, K.S.; Chen, S.-T.; Sim, S.C. (2019). An evaluative study of a mobile application for middle school students struggling with English vocabulary learning, *Comput. Hum. Behav.*, 95, pp. 208–216.
- Howard, J. & J. Major. (2004). Guidelines for designing effective English language teaching materials. <http://www.paaljapan.org/resources/proceedings/PAAAL9/pdf/Howard.pdf>
- Jamaldeen, F.F.; Hewagamage, K.P.; Ekanayaka, Y. (2018). Design Guidelines for Creating Mobile Language Learning Applications, *iJIM*, 12, pp. 52–74.
- Jaroslav Kacetl., & Blanka Klímová. (2019). Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education, *Educ. Sci.* 9, p. 179.
- Kalyan Chakravarthy, C., & Sunitha, V. (2020). An exploration of mobile apps to enhance the feasibility of Mobile Learning in engineering students for effective Reading Skills, *Journal of Xi'an University of Architecture & Technology*, 12(4), pp. 2436-2445.
- Kim, H., & Kwon, Y. (2012). Exploring smartphone applications for effective mobile-assisted language learning. *Multimedia-Assisted Language Learning*, 16(1), pp. 31-57.
- Klimova, B. (2019). Impact of mobile learning on students' achievement results, *Educ. Sci.* 9, p. 90.
- Kukulka-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction, *ReCALL*, 20(3), pp. 271-289.
- Kuldeepsinh J. Sisodiya. (2017). Mobile technologies to enhance communication skills of first year engineering students, *Ph.D. dissertation*.
- Lakshmi K. (2017). A study on the effectiveness of M-learning in developing English speaking skills of Rural Engineering students in Vellore district, *Ph.D. dissertation*.
- Lapp, D., Fisher, D. & Grant, M. (2008). You can read this text – I'll show you how': interactive comprehension instruction, *Journal of Adolescent & Adult Literacy*, 51(5), pp. 372-383.
- Leis, A.; Tohei, A.; Cooke, S.D. (2015). Smartphone Assisted Language Learning and Autonomy, *Int. J. Comput. Assist. Lang. Learn. Teach. (IJCALLT)*, 5, pp. 75–88.
- Liu, Q. and He, X. (2015). Using mobile apps to facilitate English learning for college students in China, *Ph.D. dissertation*.
- Motteram, G. (2013). Innovations in learning technologies for English language teaching, *Ph.D. dissertation*.
- Mousa mahmoud abu laban. (2017). The effectiveness of using mobile learning in developing eleventh graders' English grammar learning and motivation for English, *Ph.D. dissertation*.
- Naderi, S.; Akrami, A. (2018). EFL Learners' reading comprehension development through MALL: Telegram groups in focus. *Int. J. Instruct*, 11, pp. 339–350.
- Ness, M. (2009). Reading Comprehension Strategies in Secondary Content Area Classrooms: teacher use of and attitudes towards reading comprehension instruction, *Reading Horizons*, 49(2), pp. 143-164.
- Nichols, M. (2003). A Theory for e-learning. *Educational Technology & Society*, 6(2), pp. 1-10.
- Parmar. (2015). Acceptance and effectiveness of mobile learning in teaching and learning of English language a study, *Ph.D. dissertation*.
- Ramya, G., & Madhumathi, P. (2017). Review on use of mobile apps for language learning, *Int. J. Appl. Eng. Res*, 12, pp. 11242–11251.
- Sung, Y. T., Chang, K. E., & Yang, J. M. (2015). How effective are mobile devices for language learning? A meta-analysis, *Educational Research Review*, 16, pp. 68-84.
- Suvarna Ragini. (2010). Exploring online reading strategies for improving reading skills at secondary school level, *Ph.D. dissertation*.
- Tomlinson, B. (2010). Principles of effective materials development, In N. Harwood (ed.), *English language teaching materials*, pp. 81-108, NY: CUP.
- Vinu, P.V. (2011). Towards pervasive mobile learning—the vision of 21st century, *Procedia-Social and Behavioral Sciences*.
- Wright, S., Fugett, A., & Caputa, F. (2013). Using E-readers and Internet resources to support comprehension, *Educational Technology & Society*, 16(1), pp. 367-379.