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The Effect of Mobile-Assisted Language Learning (Mall) On ESL Students' Reading Comprehension

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Abstract

Technological advancements, particularly with the advent of smartphones and their multimedia applications in education, have significantly transformed language learning practices. One such innovation is Mobile-Assisted Language Learning (MALL), which provides learners with flexible and interactive learning experiences. This study examines the effect of MALL on reading comprehension among first-year engineering students at an engineering college in Andhra Pradesh. The experiment involved thirty students, who were first administered a proficiency test and then divided into experimental and control groups. The findings revealed that MALL-based materials significantly enhanced reading comprehension skills, particularly among slow learners and students requiring additional attention. Moreover, students exhibited a positive attitude toward MALL, citing its accessibility and engaging learning environment. The results suggest that integrating MALL materials into both teaching and learning processes can be highly beneficial in improving reading comprehension and fostering independent learning among students.

Keywords: Mobile-Assisted Language Learning (MALL), Reading Comprehension skill, Smartphones, Teaching and Learning.

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Introduction

The rapid advancement of mobile technology has transformed language learning, providing learners with a more flexible, accessible, and interactive approach. Mobile-Assisted Language Learning (MALL) has emerged as a valuable tool for language acquisition, particularly in English as a Second Language (ESL) contexts. Reading comprehension is an essential skill for ESL learners because it plays a crucial role in their academic performance and communication abilities. Traditional teaching methods often struggle to keep students engaged, whereas mobile applications provide dynamic and adaptive learning experiences. This study examines how MALL affects reading comprehension among first-year engineering students at an engineering college in Andhra Pradesh. The research investigates whether MALL-based interventions improve students' reading comprehension skills and explores their attitudes toward this method of learning. The study assumes that students using MALL-based materials will show better reading comprehension than those relying solely on traditional teaching methods.

MALL is a teaching and learning methodology that uses mobile phones or other handheld devices with wireless connectivity, such as smartphones and tablets. It integrates mobile device functionalities with the necessity for a close connection between teachers and students. Through MALL, students can access learning resources and course materials on their mobile phones as if they were using a computer with an internet connection. According to Castillo et al. (2013), mobile learning technologies allow students to access educational content using mobile devices anywhere and anytime, which enhances their ability to learn at their convenience.

Statement of the Problem

One of the significant challenges ESL students face when learning a foreign language is poor reading ability. Reading is one of the four essential language skills needed for academic success and professional growth. ESL students need to read textbooks, research articles, and other materials in English to acquire knowledge and gather information relevant to their studies and careers. Understanding complex texts is particularly crucial for students, especially those in technical fields like engineering, where academic materials often contain dense and specialized vocabulary. However, many ESL students struggle with reading comprehension, and their reading proficiency levels range from low to moderate.

There are several reasons why ESL students face difficulties in reading comprehension. These include a lack of access to reading materials, a weak reading culture, limited knowledge of reading strategies, and ineffective teaching methods. This study explores how mobile technology can help improve ESL students' reading comprehension skills by providing them with interactive and engaging learning experiences that cater to their individual needs.

In today's digital age, information is constantly expanding, and individuals must stay updated on advancements in science and technology. Reading is one of the most effective ways to acquire knowledge and remain informed. As Farhady et al. (1994) emphasize, reading is the most crucial skill for most language learners, as it serves as the foundation for acquiring a second language. Effective reading comprehension is essential for academic achievement, and according to Beatrice and Mikulecky (2008), reading forms the basis of instruction in all aspects of language learning. Given the increasing preference of young people for digital technologies, MALL provides an opportunity to make learning more engaging and effective, ultimately improving reading comprehension outcomes.

The Role of Technology in Reading Comprehension

MALL refers to the use of mobile devices, such as smartphones and tablets, to facilitate language learning. These tools allow students to learn at their own pace and provide access to

a vast range of educational resources, including e-books, vocabulary-building applications, and interactive reading exercises. Kukulska-Hulme and Shield (2008) argue that MALL enhances learner autonomy and engagement by offering flexible learning opportunities. Reading comprehension involves decoding, interpreting, and analyzing written texts, which are critical skills for academic success. This is particularly important for engineering students, who must read complex texts containing technical information. Grabe (2009) highlights that ESL learners often struggle with reading comprehension due to limited vocabulary, unfamiliar sentence structures, and cultural differences in interpreting texts.

Several studies have examined the impact of technology on reading comprehension. For example, Stockwell (2013) found that mobile-based learning significantly improves students' reading comprehension skills. Similarly, Huang et al. (2012) reported that ESL students using MALL demonstrated higher motivation and better retention of reading material compared to those relying on traditional methods. In modern classrooms, language skills are often integrated. However, as Warschauer and Meskill (2000) note, much of the research on second language learning and teaching has focused on individual skills rather than their integration. Early computer-based reading activities helped students develop reading strategies by controlling the presentation of text and offering exercises to reinforce comprehension. The advent of the internet has further expanded access to printed materials in various languages, providing additional opportunities for ESL learners to practice reading.

Mobile-Assisted Language Learning (MALL) has revolutionized reading comprehension by offering learners greater flexibility and accessibility in their language learning process. Unlike traditional methods, MALL enables students to engage with reading materials anytime and anywhere using smartphones, tablets, or other mobile devices. These interactive, multimedia-rich applications provide engaging content, including e-books, videos, quizzes, and gamified exercises that make learning more enjoyable and effective. Additionally, MALL offers instant access to support tools such as built-in dictionaries, translation features, and text-to-speech functions, which help learners better understand complex vocabulary and sentence structures.

One of the key advantages of MALL is its ability to personalize learning experiences. By adapting to individual needs and proficiency levels, these digital tools encourage more frequent and diverse reading practice, ultimately improving comprehension skills. Moreover, MALL fosters learner autonomy, allowing students to take control of their own progress and practice at their own pace. However, despite its numerous benefits, challenges such as device limitations, internet access, and potential distractions must be addressed. Additionally, integrating MALL effectively into existing curricula requires careful planning and pedagogical strategies to ensure meaningful learning outcomes. When implemented properly, MALL has the potential to transform language education and enhance reading comprehension significantly."

Methodology

This study was conducted at an engineering college in Andhra Pradesh and involved thirty first-year students. The participants were randomly divided into two groups:

- Experimental Group: 15 students who used MALL-based learning.
- Control Group: 15 students who followed traditional textbook-based learning.

To ensure fairness in the study, a small oral interview was conducted to select thirty students on a voluntary basis. They were then randomly assigned to the experimental and control groups. The selection process was based on availability and willingness of the students. The study measured the impact of MALL on reading comprehension using pre-test and post-test assessments. The reading comprehension tests were designed by the English department of the college and included multiple-choice and open-ended questions. The tests were graded based on difficulty levels ranging from intermediate to advanced. The total scores for each group

were calculated, and statistical analyses were performed to determine the correlation between the pre-test and post-test scores.

The researcher ensured that all students in the experimental group had access to mobile phones. Both groups were taught by the same teacher and received the same reading materials studied in the same classroom setting. Over a short period, four reading comprehension texts were practiced in both groups. In class, both groups followed the same reading strategies. However, for outside activities, the control group received traditional paper-based assignments, while the experimental group accessed the same assignments through their mobile phones. The mobile-based activities were divided into smaller tasks that students completed over several days. After completing these activities, both groups were tested again to measure improvements in reading comprehension. The only difference between the groups was the mode of content delivery—paper-based versus mobile-based.

Results

The study analyzed reading comprehension scores from the pre-test and post-test assessments. Initially, both groups performed similarly. The control group had an average score while the experimental group had a slightly lower average than that of control group. This indicates that, at the start, both groups had comparable reading abilities.

After the study, both groups showed improvement, but the experimental group demonstrated significantly higher progress. The control group's post-test average increased to 6.33, while the experimental group's average rose to 9.05. The statistical analysis showed that this difference was significant, indicating that MALL had a substantial positive effect on reading comprehension.

When evaluating each group separately, the control group showed moderate improvement, but the experimental group experienced a more significant increase in their scores. The data confirmed that mobile-based learning was highly effective in enhancing reading comprehension. Notably, slow learners in the experimental group exhibited remarkable progress, as the accessibility of mobile learning allowed them to review lessons at their own pace, reinforcing their understanding. These findings align with prior research suggesting that mobile learning is particularly beneficial for students requiring additional academic support.

While the majority of students responded positively to MALL, some challenges were identified. A few students reported distractions from social media and other mobile applications, which occasionally interfered with their learning process. Additionally, some students faced technical difficulties, such as slow internet connectivity or unfamiliarity with mobile learning platforms. Despite these challenges, students appreciated the convenience and flexibility of mobile learning and found it to be a more engaging approach compared to traditional methods.

Conclusion

This study demonstrates that MALL significantly enhances reading comprehension among ESL students, particularly those who need additional support. The flexibility, interactivity, and accessibility of mobile learning tools contribute to improved reading skills and promote learner autonomy. However, for more effective implementation, challenges such as potential distractions and technical difficulties must be addressed. MALL could be integrated into students' curriculum alongside traditional methods to maximize learning outcomes. Structured guidance on using mobile applications for learning can further improve their effectiveness.

Future research should explore the long-term effects of MALL on language learning and examine its impact on other language skills, such as writing and speaking. Additionally, the development of adaptive learning applications that personalize content based on learners' progress would be valuable for enhancing ESL education.

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