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Effectiveness of Digital Ludo Games for Improving English Grammar among Secondary School Students

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Abstract:

This study investigates the effectiveness of digital Ludo games as an innovative tool for enhancing English grammar skills among secondary school students. The research aims to determine whether game-based learning strategies, particularly through digital adaptations of traditional board games, can improve grammatical understanding, retention, and learner engagement. A quasi-experimental design was adopted, involving two groups—an experimental group that practiced grammar concepts through digital Ludo games and a control group that followed conventional classroom instruction. Data were collected using pre- and post-tests, observation schedules, and student feedback forms. The results revealed that students who engaged with digital Ludo games demonstrated significantly higher gains in grammar proficiency and motivation levels compared to those in the control group. The findings suggest that integrating digital game-based learning tools into the English curriculum can foster interactive, enjoyable, and effective language learning experiences.

Keywords: *Digital Learning, Game-Based Learning, English Grammar, Secondary Education, Ludo Games*

Introduction

The rapid advancement of digital technology has transformed the field of education, making learning more interactive and engaging through the use of digital tools and games. Among various innovative approaches, game-based learning (GBL) has emerged as a powerful pedagogical strategy to enhance motivation, participation, and conceptual understanding among students. In the context of language education, digital games provide opportunities for learners to practice linguistic skills in enjoyable and meaningful ways. English grammar, often perceived as a monotonous and rule-based subject, can particularly benefit

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from the incorporation of digital gaming methods that promote active learning and self-directed practice.

The traditional methods of teaching grammar in secondary schools frequently rely on rote learning, repetitive exercises, and teacher-centered instruction. These conventional practices often fail to sustain learners' interest or promote long-term retention of grammatical concepts. In contrast, digital Ludo games, adapted from the popular board game, offer a playful learning environment that integrates competition, collaboration, and problem-solving. By embedding grammar tasks within the familiar framework of Ludo, students are encouraged to apply grammatical rules in authentic contexts, thus reinforcing their understanding through continuous engagement.

Research in educational psychology emphasizes that learning is most effective when learners are emotionally involved and cognitively stimulated. Digital Ludo games, designed with levels, challenges, and rewards, can stimulate both intrinsic and extrinsic motivation, thereby improving concentration and learning outcomes. Furthermore, such games foster peer interaction, communication, and teamwork—essential components of language acquisition.

This study aims to evaluate the effectiveness of digital Ludo games in improving English grammar proficiency among secondary school students. It seeks to compare the learning outcomes of students exposed to game-based learning with those taught through traditional grammar instruction. The findings of this research are expected to contribute to the growing field of educational technology by offering insights into how simple, culturally familiar digital games can be repurposed for pedagogical effectiveness in language learning.

Review of Literature

The integration of digital games into educational settings has gained significant attention over the past two decades, especially in the context of language learning**.** Game-based learning (GBL) combines entertainment with pedagogy, promoting engagement, motivation, and retention among learners (Prensky, 2001). It provides an environment where students can learn through exploration, experimentation, and feedback, thereby supporting both cognitive and affective aspects of learning.

According to Gee (2003)**,** digital games are effective learning environments because they involve active problem-solving and immediate feedback, two critical elements in skill development. In language learning, these features encourage students to apply grammatical knowledge in practical and interactive situations, rather than through memorization**.** Reinders and Wattana (2015) found that digital games improved English language learners' confidence and willingness to communicate by reducing

classroom anxiety and creating an enjoyable learning atmosphere.

Several studies have specifically explored the role of digital games in grammar instruction**.** Neville, Shelton, and McInnis (2009) emphasized that game-based learning environments help students understand abstract grammatical concepts through contextualized practice. Similarly, Ranalli (2008) demonstrated that computer-based games focusing on grammar drills significantly enhanced learners' accuracy and motivation compared to traditional instruction. These findings suggest that digital games can serve as effective supplementary tools for grammar learning.

In the Indian context, the adoption of educational technology in English language teaching is growing, but the use of digital board games such as Ludo remains underexplored. Anitha and Samuel (2020) reported that incorporating indigenous and familiar games in digital formats enhances student engagement and cultural relevance in learning. The adaptability of traditional games like Ludo makes them suitable for designing interactive grammar tasks that appeal to students' interests while maintaining academic rigor.

Furthermore, constructivist theories (Piaget, 1972; Vygotsky, 1978) support the use of interactive digital environments in education. These theories emphasize that knowledge is constructed through social interaction and meaningful experiences. Digital Ludo games, when used as educational tools, align with these principles by fostering collaborative learning and contextual application of grammar rules.

Overall, the reviewed literature indicates that digital games hold strong potential for improving English grammar learning outcomes among secondary school students. However, limited empirical research exists on the effectiveness of digital Ludo-based grammar games**,** particularly in the Indian educational context. This study, therefore, aims to fill this research gap by assessing how digital Ludo games influence grammar proficiency, motivation, and classroom engagement.

Objectives of the Study

The main objective of this study is to evaluate the effectiveness of digital Ludo games in enhancing English grammar learning among secondary school students. The study seeks to explore how game-based learning strategies can influence grammar proficiency, motivation, and classroom engagement. The specific objectives are as follows:

1. To assess the impact of digital Ludo games on students' understanding and application of English grammar rules.
2. To compare the effectiveness of digital Ludo game-based learning with traditional grammar teaching methods.

3. To examine students' levels of interest, motivation, and participation while learning grammar through digital games.
4. To identify students' perceptions and attitudes toward using digital games as a learning tool in English grammar instruction.
5. To suggest pedagogical implications for integrating digital games into the English language curriculum at the secondary school level.

Research Methodology

The present study adopted a descriptive research method to examine the effectiveness of digital Ludo games in improving English grammar among secondary school students. The descriptive approach was chosen to collect detailed information about students' learning experiences and outcomes when exposed to game-based grammar activities.

Sample of the Study

A total of 40 students from Grade IX of St. John's School were selected randomly for this study. The participants represented a mixed group of boys and girls with varying levels of English proficiency. All participants were familiar with basic digital tools and had prior exposure to English grammar instruction through traditional classroom methods.

Procedure of the Study

The study was conducted in several stages:

Literature Study

Relevant literature, research papers, and online resources related to digital game-based learning and grammar instruction were reviewed. This helped in understanding existing models of educational games and in identifying suitable features for the present study.

Game Model Development

The digital Ludo game model was designed by referring to existing online game structures and adapting them to meet the objectives of English grammar learning. Modifications were made to ensure that grammar questions and tasks were integrated into the gameplay, making learning both interactive and enjoyable.

Content Selection

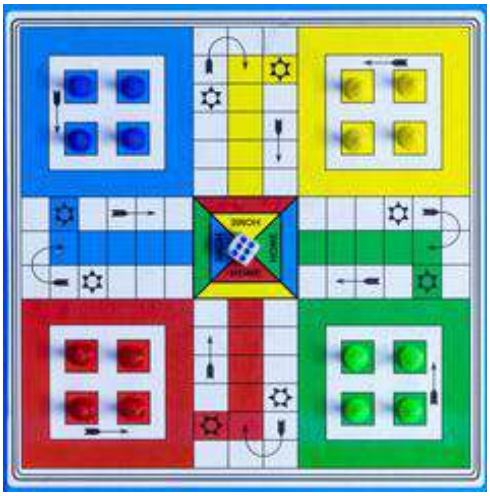
The grammar content used in the game was collected from several standard grammar textbooks for secondary school students and verified using online educational resources**.** Topics such as tenses, prepositions, articles, and subject–verb agreement were included to align with the Grade IX English syllabus.

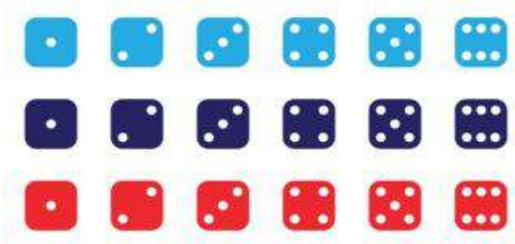
Implementation

Students were introduced to the digital Ludo game in a controlled classroom setting. They were guided on how to play the game, answer grammar-related questions, and track their progress. Observations were made regarding their engagement, participation, and responses during the activity.

Data Collection

Data were gathered from students' performance in the grammar exercises embedded in the digital Ludo game, classroom observations, and informal feedback. These data sources helped to analyze the effectiveness of the game in enhancing grammar comprehension and interest in English learning.





Result and Discussion

Result of the Product The result of this study was a set of Ludo Words Game (LWG) which can be used as a media to learn English Grammar. A set of this game contains a board of Ludo Words Game (LWG), eight pawns, a dice, and four sets of questions cards. 1) The board of Ludo Words Game The game board had seventy-two grids with three different colours which represented the colours of the questions cards. There were five homes including the finish. The size of the board was 50 cm x 50 cm with each grid has length 3 cm and width 3 cm. 2) Dice and Pawns There were a dice and eight pawns for this game. The dice was made from wooden which was painted. The pawns were from a used checkers and painted. The colour of dice was black and the colour of pawns were Red, yellow, green and blue.

Educational Implications

Digital Ludo games improve learning by boosting engagement, motivation, and cognitive skills like strategy and problem-solving. They offer concrete representations of abstract concepts and allow for personalized learning at each student's pace. However, challenges include ensuring diverse student needs are met, managing limited classroom time, and providing adequate teacher training for effective integration into the curriculum. The interactive nature of digital Ludo makes learning more active, reinforcing concepts through repetition and increasing students' motivation. Playing Ludo fosters social skills such as taking turns, collaborating, following rules, and developing patience.

Advantages of Digital Ludo Games

Digital Ludo games provide a modern, technology-enhanced version of the traditional board game, offering numerous

educational and psychological benefits. Apart from serving as a recreational activity, digital Ludo has significant potential as a pedagogical tool, especially when adapted for educational purposes such as language learning. The following are the key advantages of digital Ludo games:

Convenience and Accessibility

Digital Ludo games offer anytime–anywhere accessibility**,** eliminating the need for physical boards or dice. Students can play on their smartphones, tablets, or computers at their convenience, allowing learning beyond classroom boundaries. The engaging visuals**,** characterized by vibrant colours, smooth animations, and attractive interfaces, make the gaming experience enjoyable and immersive. Additionally, the inclusion of sound effects, background music, and in-game chat options enhances user interaction and maintains attention, making learning more dynamic and interactive.

Skill Development

Digital Ludo games contribute significantly to the development of cognitive and analytical skills**.** Players are required to think strategically, plan their moves, and anticipate opponents' actions, which strengthens critical thinking and problem-solving abilities**.** The game also promotes mathematical skills**,** as players frequently engage in counting moves and tracking positions, reinforcing basic numerical understanding. Furthermore, the need for quick decision-making enhances reaction time **and** concentration**,** skills that are equally valuable in academic contexts.

Social Connection

One of the major advantages of digital Ludo is its ability to connect players globally. Through online multiplayer modes**,** students can interact with friends, classmates, and international peers, fostering social engagement and collaborative learning**.** The availability of instant matchups allows players to quickly join games and build teamwork and communication skills in a fun environment, thereby extending learning beyond traditional classroom settings.

Entertainment and Stress Reduction

Digital Ludo games also serve as a source of entertainment and relaxation**.** The playful and competitive nature of the game helps reduce stress and mental fatigue, promoting a sense of well-being. Engaging in such games triggers the release of endorphins, often referred to as "happy hormones," which enhance mood and motivation. This positive emotional state contributes to a more receptive attitude toward learning**,** making digital Ludo an effective tool for maintaining interest in educational subjects such as English grammar.

Conclusion

The most common benefits are that it makes studying English more enjoyable and attracts the interest of students. Game-based learning's integration of Ludo pedagogy provided students with a

structured yet playful environment, promoting active participation and knowledge retention. Playing vocabulary games provide an enjoyable, comfortable atmosphere so that it works on students successfully. The result of this research showed that the games which have been employed by the teacher could improve very young learners' achievement in vocabulary learning.Digital Ludo games have successfully transformed a classic board game into a modern, widely accessible phenomenon. While maintaining the core mechanics of chance and strategy, the digital version has expanded its appeal and features, offering both new benefits and drawbacks compared to traditional gameplay.

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