Exciting Trial Class Using Digital Game-Based Learning (DGBL) at Al-Azhar Cairo Sukoharjo Islamic School

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Abstrak

DGBL mengintegrasikan permainan digital ke dalam proses pembelajaran, memanfaatkan sifat permainan yang memotivasi dan imersif untuk menciptakan lingkungan yang interaktif dan menyenangkan. Penelitian ini menggunakan pendekatan metode campuran termasuk observasi kelas, survei, diskusi kelompok terarah, dan evaluasi kinerja untuk mengevaluasi keefektifan pendekatan inovatif ini. Berdasarkan prinsip-prinsip pembelajaran aktif dan situasional, hasilnya menunjukkan peningkatan yang signifikan dalam keterlibatan siswa, motivasi, dan pemahaman tentang mata pelajaran yang kompleks seperti matematika dan sains. Namun, tantangan seperti perlunya pelatihan guru yang berkelanjutan, penyelarasan kurikulum, dan infrastruktur teknologi disebut sebagai hambatan untuk implementasi penuh. Terlepas dari kendala-kendala tersebut, penelitian ini menyoroti potensi DGBL untuk mengubah metode pengajaran tradisional dan menunjukkan perlunya penelitian lebih lanjut untuk mengoptimalkan penggunaannya dalam konteks pendidikan yang berbeda dan kebutuhan pembelajaran individu.
Kata kunci: Pembelajaran Berbasis Permainan Digital (DGBL), Keterlibatan Siswa, Kelas Uji Coba, Metode Pengajaran Inovatif, Integrasi Teknologi dalam Pendidikan.

Abstract

DGBL integrates digital games into the learning process, utilizing the motivating and immersive nature of games to create an interactive and fun environment. The study utilized a mixed-method approach including classroom observations, surveys, focus group discussions, and performance evaluations to evaluate the effectiveness of this innovative approach. Based on the principles of active and situational learning, the results show significant improvements in student engagement, motivation, and understanding of complex subjects such as math and science. However, challenges such as the need for ongoing teacher training, curriculum alignment and technological infrastructure were cited as barriers to full implementation. Despite these obstacles, this research highlights the potential of DGBL to transform traditional teaching methods and points to the need for further research to optimize its use in different educational contexts and individual learning needs.
Keywords: Digital game-based learning (DGBL), student engagement, trial class, innovative teaching methods, technology integration in education.

1. INTRODUCTION

Digital Game-Based Learning (DGBL) is a teaching method that integrates digital games into the learning process to enhance student engagement and learning experience. This approach aims to utilize the motivational effects of games to engage students in the learning process, thus making learning more interesting and effective. As Prensky (2001) explains, DGBL utilizes video or digital games as teaching tools that support the achievement of learning objectives. This approach utilizes the interactive and immersive nature of games to create an engaging educational environment. According to Xu et al. (2019), DGBL also involves digital game activities to achieve learning objectives and assess student learning outcomes. This approach is proven to not only improve students'

academic performance but also create a more active classroom atmosphere (Wang & Tahir, 2020).

Al-Azhar Islamic School Cairo Sukoharjo is one of the branches of Al-Azhar Islamic School Cairo Indonesia that combines the national curriculum with IMTAQ and science and technology-based education. The school implements Digital Game-Based Learning (DGBL) as an innovative learning method to create a more interactive learning environment. DGBL is a learning approach that utilizes digital games to increase student engagement, motivation and understanding of the material.

This research aims to evaluate the implementation and impact of a pilot class using the DGBL method at Al-Azhar Islamic School Cairo Sukoharjo. Through this approach, the study sought to measure the extent to which digital games can increase student engagement and understanding, especially in complex subjects such as math, science, and language arts. The problem-solving plan was carried out by integrating digital games designed to meet the needs of the school curriculum and involving the active participation of students, teachers, and administrators to ensure a collaborative approach in the assessment of DGBL effectiveness.

2. METHODS

This study uses a research method that involves a systematic approach to collecting and analyzing primary and secondary data to evaluate the effectiveness of a fun and active trial class learning method.

1. Primary data collection

1.1 Classroom observation

Classroom observations were conducted to monitor and record student engagement and interaction during the DGBL sessions. Observations focused on students' participation, enthusiasm, and responses to the digital games used in the lesson.

2.1 Student survey

Surveys and questionnaires were distributed to students and teachers to gather their perceptions and experiences regarding the use of digital games in the classroom.

3.1 Focus group discussion

Focus group discussions were held with small groups of students and teachers to facilitate in-depth conversations about DGBL implementation. These discussions helped identify common themes, challenges, and benefits observed during the pilot classes.

4.1 Performance assessment

Students' performance was assessed through quizzes, tests, and assignments designed to measure their understanding and retention of the subjects taught using DGBL. Comparing these assessments with those from traditional teaching methods helped evaluate the impact of DGBL on academic performance.

2. Secondary data collection

Secondary data collection involved reviewing existing literature, school records, educational frameworks, case studies, and online resources related to the fun Digital Game-Based Learning (DGBL) method. This included analyzing past student performance and engagement data, studying successful implementations in other institutions, and ensuring alignment with educational guidelines. By utilizing such sources, this internship program aims to supplement primary data with a thorough understanding of effective teaching strategies.

3. RESULTS AND DISCUSSION

1. The implementation of digital game-based learning (DGBL) at al-azhar cairo

sukoharjo islamic school

The implementation of Digital Game-Based Learning (DGBL) at Al-Azhar Cairo Sukoharjo Islamic School was carried out in a trial class. This chapter presents the findings from the pilot class and discusses the results and implications of integrating digital games into the educational process. During this trial, the writer participated as a teacher, playing a direct role in the integration of digital games into classroom activities. This involvement allowed the writer to observe firsthand the impact of DGBL on student engagement and learning outcomes. This chapter presents the finding from the trial classes and discusses the outcomes and implications of integrating digital games into the educational process.

Picture 3.1 Student with iPad for DGBL learning

1.1 Student engagment

One of the primary objectives of introducing Digital Game-Based Learning (DGBL) was to enhance student engagement. Observations and feedback from both teachers and students indicated a significant increase in engagement levels. Students were more attentive and actively participated in classroom activities. The interactive nature of digital games captured their interest and sustained their attention throughout the lessons.

1.1.1 Observation data

There was a noticeable increase in student participation during lessons that incorporated digital games, as students were eager to answer questions, complete tasks, and interact with the game content. Additionally, surveys conducted with students revealed that they found the lessons more enjoyable and stimulating, with many expressing that they looked forward to classes that included digital games.

2. Discussion

In practice, the implementation of DGBL at Al-Azhar Cairo Sukoharjo Islamic School reflected these principles. The trial class effectively utilized digital games that required students to actively participate in learning activities, aligning with the principle of active learning. The increase in student engagement observed during the trial, as noted through higher participation rates and positive feedback, supports the theoretical claim that games can enhance motivation and engagement. The games also provided immediate feedback, which helped students correct their mistakes and improve their understanding of the material, directly correlating with the theoretical benefits discussed.

The implementation also revealed challenges that were not fully addressed in the theoretical framework. While the literature emphasizes the importance of teacher

training and curriculum alignment (Watson et al., 2011), the trial at Al-Azhar Cairo Sukoharjo Islamic School underscored the difficulties teachers faced in adapting to new digital tools and integrating them into existing lesson plans. Although teacher training was provided, the need for continuous professional development was more significant than anticipated, suggesting that the theoretical models may understate the practical challenges of implementing DGBL in a real-world educational setting.

The theoretical background discussed the benefits of personalized learning through games that adapt to individual learning styles and paces (Connolly et al., 2012). While the implementation at Al-Azhar Cairo Sukoharjo Islamic School did not fully explore this aspect, the positive responses from students and improved academic performance suggest that even without extensive professionalization, DGBL can still yield substantial educational benefits. This finding points to the potential for further refinement of the DGBL approach to better leverage personalized learning opportunities.

In terms of situated learning, the games used during the trial provided meaningful contexts for students to apply their knowledge, particularly in subjects like science and mathematics. This practical application aligns with the theoretical assertion that situated learning can enhance the relevance and retention of knowledge. The improved test scores and deeper understanding of complex concepts observed during the trial support this theoretical perspective.

The enjoyment and motivation factors highlighted in the theoretical literature were evident in the students' feedback during the trial. Students expressed greater enthusiasm for lessons that incorporated digital games, confirming the theory that enjoyment is a crucial motivator in learning. However, the trial also revealed the importance of technical infrastructure, a challenge that the theoretical framework acknowledged but did not fully explore. The practical issues of software glitches and hardware availability encountered during the trial suggest that for DGBL to be effective, schools must invest in robust technological support systems.

DGBL proved effective in improving student engagement, motivation and learning outcomes. However, this implementation also highlights challenges that require ongoing attention, particularly in teacher training, curriculum integration and technical support. The findings suggest that while the theoretical benefits of DGBL are well supported, successful implementation depends on addressing practical challenges to realize the potential of digital games in education.

4. CONCLUSION AND SUGGESTION

1. Conclusion

The implementation of Digital Game-Based Learning (DGBL) at Al-Azhar Islamic School Sukoharjo Cairo has achieved positive results in improving student engagement, motivation and learning outcomes. Observations and data show that this approach creates an interactive and fun learning environment, increases students' engagement in class, and improves their understanding of the material. In addition, DGBL also promotes contextually relevant learning, in line with the principles of active learning and contextual learning. However, there are some challenges during implementation, such as the need for continuous teacher training and adequate technical support, which must be addressed to ensure the success of the program.

2. Suggestion

Future research is needed to refine the implementation of Digital Game-Based Learning (DGBL) to make it more effective in supporting the learning process. A key focus for future research should include a deeper exploration of the

professionalization of DGBL learning by tailoring digital games to the needs, abilities and learning styles of individual students. In addition, a more comprehensive assessment of the impact of DGBL on different age groups, subjects and cultural contexts is also important to understand the versatility of this approach.

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