

**TASK-BASED AND GAME-BASED LEARNING STRATEGIES FOR
LANGUAGE DEVELOPMENT TO DYSLAXIC STUDENTS**

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Abstract: *This study examines the role of digital game-based learning (DGBL) in supporting the educational development of children with dyslexia. It highlights the positive effects of games designed with clear objectives, interactive environments, and accessible features on children's motivation, attention, and reading skills. The findings emphasize the importance of teachers' competence in integrating such tools and suggest that digital games, when thoughtfully designed, can enhance literacy development in children with specific learning disabilities.*

Keywords: *Dyslexia, game-based learning, digital educational games, specific learning disabilities, literacy development, assistive technology, vocabulary building.*

Аннотация: *Данное исследование рассматривает роль цифровых обучающих игр (DGBL) в поддержке образовательного развития детей с дислексией. Отмечено положительное влияние игр, разработанных с четкими целями, интерактивной средой и доступными функциями, на мотивацию, внимание и навыки чтения у детей. Результаты подчеркивают важность профессиональной подготовки педагогов для интеграции таких технологий и показывают, что грамотно разработанные цифровые игры способны значительно способствовать развитию грамотности у детей с особыми образовательными потребностями.*

Ключевые слова: *Дислексия, игровое обучение, цифровые обучающие игры, специфические нарушения обучения, развитие грамотности, вспомогательные технологии, расширение словарного запаса.*

Anotatsiya: *Ushbu tadqiqot raqamli o'yin asosidagi ta'lim (DGBL) ning*

disleksiya tashxisi qo'yilgan bolalarning ta'limiy rivojlanishidagi o'rnini tahlil qiladi. Aniq maqsadlar, interaktiv muhit va qulay interfeysga ega bo'lgan o'yinlarning bolalarning motivatsiyasi, diqqat-e'tibori va o'qish ko'nikmalariga ijobiy ta'siri qayd etilgan. Natijalar shuni ko'rsatadiki, o'qituvchilarning bunday texnologiyalarni to'g'ri qo'llash bo'yicha bilim va ko'nikmalari muhim bo'lib, puxta ishlab chiqilgan raqamli o'yinlar alohida ta'lim ehtiyojlariga ega bolalarning savodxonlik ko'nikmalarini rivojlantirishda samarali vosita bo'la oladi.

Kalit so'zlar: *Disleksiya, o'yin asosidagi ta'lim, raqamli o'quv o'yinlari, maxsus ta'lim ehtiyojlari, savodxonlikni rivojlantirish, yordamchi texnologiyalar, lug'at boyligini oshirish.*

INTRODUCTION

In recent years, game-based learning has gained increasing attention as an effective instructional approach, particularly for children with specific learning disabilities such as dyslexia. Educational games designed with clear objectives, interactive content, and accessible features have been shown to positively influence children's motivation, attention, and overall learning outcomes. This study explores various digital game-based learning methods, their impact on children with dyslexia, and the essential elements required for developing effective and inclusive educational games.

MAIN BODY

Games created following specific instructional principles have demonstrated positive outcomes in enhancing children's learning experiences. However, many of these games primarily focus on introducing letters to children without providing opportunities to expand their vocabulary by forming new words. Incorporating features that allow children to construct and learn new words from the letters they collect could significantly improve their ability to read texts with greater ease. Additionally, research has emphasized the importance of maintaining a clear and simple interface in educational applications, avoiding excessive menus and unfamiliar terms, and using straightforward, easily recognizable texts. Despite these findings, there remains a limited number of studies dedicated to the development of educational

games specifically designed for children with special educational needs.

To address this gap, this study recommends creating a two-dimensional digital educational game tailored for primary school students with dyslexia. It highlights various types of game-based learning approaches, including physical (kinetic) games, electronic or digital games, and traditional games. According to research results, all these game formats positively influence the educational progress of children with learning difficulties such as dyslexia and attention deficit hyperactivity disorder (ADHD). Through these interactive methods, teachers have successfully boosted students' self-esteem, sustained their attention, and increased their motivation toward learning activities. However, it has also been noted that to implement these techniques effectively, educators need appropriate training and skills in developing and adapting educational games to suit the individual learning needs of children. Otherwise, the misuse of such methods may present additional challenges for teachers. The study further reveals that while educational games help children with dyslexia improve their reading abilities, these improvements do not always translate into other areas of learning, such as writing and spelling. To enhance the effectiveness of digital game-based learning (DGBL), five key strategies have been identified: creating an engaging and interactive gaming environment, enriching game design with immersive details, including customized tasks and problem-solving activities, allowing learners to independently explore within the game, and actively collecting player feedback. The success of these strategies depends on available resources, the subject matter, as well as the preferences and needs of students. When applied effectively, these methods can generate valuable insights for future educational game projects.

In the course of the research, specific components were chosen and developed for a mobile game-based learning system. The learning progress of participants who tested this system was evaluated, and the results showed that several factors contributed to the effectiveness of the game: a well-structured storyline, a points and rewards system, clearly defined tasks and objectives, progressive game stages, instant in-game feedback, and a system for tracking achievements. Integrating these elements into the game design led to noticeable improvements in the learning outcomes of

children with dyslexia. These findings are expected to serve as helpful guidance for future research and the creation of new educational games. Additionally, during the study, five specialized digital games were designed for children with various specific learning disabilities (SpLD), including dyslexia. These games served as comprehensive instructional tools for addressing different types of learning challenges. The research also assessed the comfort levels and acceptance of these tools among both students and educators, while testing adaptive difficulty settings tailored to learners' individual abilities. Based on the study's outcomes, a prototype of a mobile application was proposed for children with dyslexia, featuring immediate feedback mechanisms for students, teachers, and technical support staff.

Other scholarly works have recommended effective strategies for educational game development, including using the Open Dyslexic font, creating simple and user-friendly layouts, employing short and clear text, and selecting appropriate font sizes (12 or 14 pt) in dark colors to enhance readability. Games incorporating these strategies were shown to positively affect the learning process. Moreover, phonological exercises and attention-enhancing activities were identified as beneficial for students, experienced teachers, and dyslexia support centers alike. In all the studies reviewed, participating children had been formally diagnosed with mild dyslexia by specialists and speech therapists. Furthermore, parents acknowledged that digital learning tools effectively engaged and motivated their children. Another study tested a mobile application for dyslexic children, developed based on specific data collected during the design process. The app successfully minimized distractions and improved students' focus and activity levels, confirming the substantial potential of digital games and mobile applications in supporting children's education.

CONCLUSION

In conclusion, research demonstrates that educational games offer significant potential in supporting the literacy development of children with dyslexia. Games incorporating features such as engaging storylines, reward systems, clear objectives, and immediate feedback have proven to enhance children's reading abilities and boost their self-confidence. Future digital game-based learning projects should consider

applying proven methods, including appropriate fonts, clear layouts, and phonological exercises, to create supportive learning environments.

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