

The use of genially interactive learning media on aspects of early childhood development

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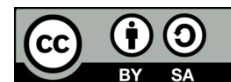
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Abstract

Various aspects of early childhood development often fail to reach their full potential, including low active participation and children's limited focus during learning activities. One contributing factor is the continued use of traditional learning media, which tends to be less engaging and quickly leads to boredom. This study aims to describe the use of Genially interactive learning media in early childhood development. The subjects were children aged 5–6 years. This research employed a qualitative method with a descriptive approach, using observation and interviews with teachers as data collection techniques. Data were analyzed using the Miles and Huberman interactive model, including data collection, presentation, and drawing conclusions. The results show that the use of Genially interactive media improves the quality of the learning process, particularly in increasing motivation, encouraging active participation, and enhancing children's understanding of basic number concepts through engaging and meaningful learning experiences.

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INTRODUCTION

Young children go through critical developmental stages that shape their future development. The ages of 0 to 6 are known as the “golden years,” a period during which children’s growth and development occur rapidly and are highly sensitive to environmental stimuli. Therefore, early childhood education (ECE) plays a vital role in supporting children’s comprehensive and sustainable development through methods aligned with their developmental characteristics (Berk, 2020)

Early childhood development is a process encompassing several interconnected dimensions, such as religious and moral values, physical-motor, cognitive, language, social-emotional, and artistic development. These developmental aspects are not isolated but influence one another and develop together. Children’s development will achieve optimal outcomes when all aspects are stimulated in a balanced manner through meaningful and context-appropriate learning experiences (Suyadi & Dahlia, 2018).

Field observations indicate that early childhood development has not yet reached its full potential in various aspects. One issue is the lack of active participation by children in learning activities. This is evident in children who quickly lose focus, show little enthusiasm for participating in activities, and tend to remain silent when the teacher is presenting material. This situation indicates that stimulation for children’s development is not yet optimal, particularly in cognitive, language, and social-emotional aspects. This is caused by several factors, one of which is that the learning materials used tend to be monotonous, making it easy for children to become bored and struggle to understand the lessons.

Many educators still rely on lecture-based methods or unengaging worksheets that fail to capture the attention of young children. These methods often bore children and make them uninterested in participating in learning. In fact, early childhood education should be conducted through a play-based approach; this is the best way to begin learning because it makes children active, enthusiastic, and able to enjoy the learning process. Another common issue is the lack of appropriate learning materials. Young children tend to grasp concepts more easily when given the opportunity to learn through hands-on experiences, such as using manipulatives or engaging in interactive activities.

With advances in technology, educational media offer solutions to these challenges. However, more interactive and engaging educational media are needed so that children can learn in a fun way. One type of educational media well-suited for use today is digital-based educational media. (Sukaryanti et al., 2021) argue that the use of digital media serves as an alternative and a solution to make students more active in the learning process, one of which is by utilizing Android devices. Digital-based learning media are tools used to create audio-visual content (Mariyah et al., 2021). These digital-based learning media can take electronic forms such as: e-books, websites, e-modules, Flash, interactive multimedia CDs, and others (Sitepu, 2021). Therefore, the availability of these digital-based learning media is expected to enhance students’ motivation to learn, particularly among early childhood learners.

Interactive learning media, such as digital apps and online platforms, have proven effective in boosting student engagement in early childhood education through visual and audio elements and direct interaction. This is thanks to advancements in information and communication technology (ICT), which have created innovative opportunities in this field. Genially has emerged as an interactive content creation platform that enables the development of learning materials. Genially is an online learning platform that helps teachers create creative and innovative learning materials, such as presentations, games, educational videos, and various other types of content (Enstein et al., 2022). This platform offers various features such as presentations, animations or videos, infographics, digital posters, quizzes, and games that can create an interactive learning experience for students (Fatma, 2022). The diversity of these features is one of the reasons for using Genially in delivering learning materials, making the process more engaging and preventing boredom.

Based on research conducted by (Fatma, 2022), the use of Genially as a learning medium can help students understand lessons supported by videos and images. The average pretest score was 44.00, indicating that students’ initial proficiency was still low; however, after receiving instruction using Genially, students achieved an average posttest score of 77.75. Similarly, research by (Hidayati et al., 2025) found that the use of

quiz games via the Genially platform was more efficient in helping students engage with diverse quiz-based exercises. Furthermore, research by (Florentina et al., 2025) demonstrated that the use of Genially as a learning medium was effective in boosting the learning motivation of 11th-grade TKJ students.

The novelty of this study lies in the use of Genially-based interactive learning media in early childhood education. Several previous studies have implemented Genially-based interactive learning media to enhance students' learning abilities. However, most of these studies were conducted at the elementary and secondary school levels and focused on the mastery of abstract mathematical concepts. There is still very little research that specifically implements Genially-based media for early childhood education, even though children at this age are in the concrete operational stage and require interactive, visual, and engaging learning media. Furthermore, much of the learning media used for early childhood education remains conventional or based on simple applications, which do not fully utilize Genially's interactive features such as animations, sounds, and exploratory activities.

Thus, this study aims to describe and analyze how Genially interactive learning media is applied in relation to aspects of early childhood development. More specifically, this study focuses on identifying how the media is used, how teachers facilitate interactive activities, and children's reactions and participation during the learning process. Furthermore, this study also aims to evaluate the extent to which Genially media contributes to aspects of child development.

METHOD

This study employed a qualitative method with a descriptive qualitative approach. This method was chosen to gain an in-depth understanding of the use of Genially-based interactive learning media in the context of early childhood development. The research subjects consisted of children aged 5–6 years at an institution in Purwakarta Regency. Data collection was conducted through observation of the children's learning activities during media use and in-depth interviews with classroom teachers to explore the process of media use and the children's responses during the activities. Data analysis was performed using the Miles and Huberman interactive model, which consists of three stages: data reduction, data presentation, and drawing conclusions. The analysis process was conducted continuously, from data collection through to the interpretation of research results, yielding a comprehensive and valid description of the phenomenon under study.

RESULTS AND DISCUSSION

Result

A. Increasing Children's Engagement and Motivation to Learn

The use of Genially has proven effective in boosting children's participation and enthusiasm during learning activities. Throughout the session, the children showed enthusiasm in following each step, vied to interact with the digital materials, and expressed joy when they successfully completed the on-screen challenges.

“Most of the children seemed excited when it was their turn to play the number game. They clapped every time they answered correctly and cheered when their friends successfully completed a task.” (Observation, November 2025)

“The children were more focused and less easily distracted while learning with Genially, and some even asked for extra time to play while learning.” (Interview with Teacher A, November 2025)

The results of these observations and interviews indicate that interactive media with engaging visuals can naturally stimulate children's curiosity and enthusiasm for learning. Active engagement is evident not only in the children's facial expressions and body language but also in their verbal participation during the learning

process. Children asked questions more frequently, responded to the teacher's instructions, and were willing to take on challenges within the games. Increased motivation was also evident in the children's persistence in completing tasks on Genially. The children did not get bored easily and remained focused until the activity was finished; when they gave the wrong answer, they tried again without giving up and were eager to correct their mistakes. These results align with the principles of learning through direct experience and repeated exploration.

B. Supporting Children's Diverse Learning Styles

Genially also supports various learning styles, including visual, auditory, and kinesthetic. Children who prefer visual learning can take advantage of colorful animations and interactive images, while auditory learners enjoy sounds that respond directly to their answers. Some children also show a kinesthetic tendency when touching objects on a projector screen or laptop. The combination of visual, auditory, and kinesthetic elements allows each child to learn in the way that works best for them.

"The children seem to use various approaches to understand the tasks on Genially. Some of them pay close attention to the images and colors on the screen, while others mimic the sounds of the numbers they hear. There are also children who appear delighted as they move objects on the screen while counting aloud." (Observation, November 2025)

"By using Genially, every child can learn in the way they prefer. Some children focus on the images, some mimic the sounds of the numbers, and all seem to enjoy their learning." (Interview with Teacher A, November 2025)

The results of these observations and interviews indicate that the use of Genially in the classroom makes learning more inclusive and adaptable to different learning needs. Children who are typically passive when learning with traditional media began to participate when this tool was used, and children who are visual learners and previously struggled to focus on verbal explanations became more engaged when they saw numbers and colors. Meanwhile, children who are more responsive to sound appear delighted when they hear the sound indicating a correct answer. The activity of clicking on objects on the screen also provides a hands-on experience for children who need kinesthetic stimulation to understand concepts.

C. Improving Children's Understanding of Basic Number Concepts

Research findings indicate that Genially significantly improves children's understanding of simple number concepts. Through object-counting games and activities that match numbers with images, children can recognize number symbols, sequence numbers from 1 to 10, and understand the relationship between numbers and the actual quantity of objects. Observations show that most children are able to complete tasks correctly and demonstrate accuracy from one session to the next.

"The children appeared enthusiastic while counting the images on the screen. They called out the numbers loudly while pointing to each object one by one. When the number of objects increased or decreased, some children spontaneously said 'add one' or 'subtract one,' indicating that they were beginning to grasp the basic concepts of addition and subtraction." (Observation, November 2025)

"Children grasp the meaning of numbers more quickly because they see the number of objects change directly every time they click. They aren't just memorizing; they're truly understanding the concept." (Interview with Teacher A, November 2025)

Additionally, using Genially helps children understand number concepts through meaningful learning experiences. The process of presenting numbers through animations and direct interaction gives children the

opportunity to build understanding through observation, trial and error, and simple reflection. Children don't just count mechanically; they learn to connect number symbols with the real-world representation of the quantity of objects.

Discussion

A. Increasing Children's Engagement And Motivation To Learn

The use of the interactive learning platform Genially significantly increases young children's participation and enthusiasm in the learning process. During the learning process, the children appeared active and enthusiastic in participating in each activity. They vied to interact with the platform and showed excitement when they successfully completed challenges on the screen. These findings indicate that visually engaging interactive media can enhance children's attention and interest in learning. This aligns with research (Kurniawati & Hidayat, 2020), which states that interactive digital media can increase children's motivation to learn through game-based and enjoyable experiences. Media such as Genially presents game elements and challenges appropriate for early childhood development, which typically involves learning through exploration and interaction (Sari & Khasanah, 2022).

In addition, increased learning motivation in children is also linked to Self-Determination Theory (Ryan & Deci, 2017), which emphasizes three basic psychological needs: autonomy, competence, and social connection. Through Genially, children gain autonomy in choosing activities, feel competent when successfully completing challenges, and have the opportunity to interact positively with peers and teachers. These three aspects reinforce children's natural motivation to learn independently and enjoyably. The improvement in children's focus and perseverance also indicates that Genially can create conditions for flow learning—a state where individuals are fully immersed in challenging yet enjoyable activities (Pratiwi et al., 2019). Children who enjoy the learning process without pressure demonstrate that interactive digital media can foster meaningful learning experiences centered on children's natural curiosity.

B. Supporting Children's Diverse Learning Styles

Genially supports various learning styles in children, including visual, auditory, and kinesthetic. Visual learners benefit from animations and colorful images; auditory learners enjoy the sounds that accompany each answer; while kinesthetic learners engage directly through engaging activities and by clicking on objects on the screen. These findings reinforce the perspective (Fleming, 2017) within the VARK Learning Style Model that the learning process is more effective when tailored to a child's learning style preferences. Interactive media like Genially combine visual, audio, and motion elements to meet the diverse learning needs of young children. Furthermore, these findings are also consistent with the Cognitive Theory of Multimedia Learning proposed by (Mayer, 2020), which explains that learning is more effective when information is presented through a combination of visual and verbal elements.

In the context of early childhood education, the use of interactive media allows children to build connections between verbal representations (sounds, numbers, teacher instructions). This helps them process information more efficiently and enhances long-term memory of the concepts learned (Miranti et al., 2021). In addition to improving learning effectiveness, Genially also promotes inclusion and social participation. Children who are typically passive in traditional learning become more engaged because they discover learning methods that align with their learning styles. This aligns with research findings (Rachmawati & Lestari, 2020), which state that interactive digital media encourages active participation and collaboration among children. Therefore, Genially serves not only as a teaching tool but also as a means to strengthen child-centered learning.

C. Improving Children's Understanding of Basic Number Concepts

The interactive platform Genially has proven effective in enhancing young children's understanding of basic number concepts. Through games that involve counting objects and matching numbers with images, children can recognize number symbols and the quantities of real objects. This finding aligns with Brunner's

theory of learning representations (as cited in Puentedura, 2019), which emphasizes three stages of cognitive development: children interact directly with objects (the enic stage), observe visual animations (the iconic stage), and recognize number symbols (the symbolic stage). These three stages support the development of a more meaningful mathematical understanding in early childhood.

(Wulansuci & Kurniati, 2019) emphasize that the introduction of mathematical concepts should be conducted through concrete, contextual, and enjoyable activities so that children do not experience academic pressure and are able to develop conceptual understanding gradually. (Wahyuni & Dinar, 2022) found that children who learn through interactive digital game-based media demonstrate significant improvements in number recognition and counting skills compared to children who learn using traditional methods. This is due to children's active participation in visual-based and exploratory activities, which enables the transfer of concepts from digital experiences to real-world situations. Furthermore, this approach supports the principle of learning through experience, as described by (Kolb, 2015) in the Experiential Learning Cycle Theory, where children understand concepts through real-world experiences, reflection, and direct application. When children observe changes in the number of objects on the screen and connect them to numbers, their basic logical and mathematical thinking processes develop naturally. Therefore, Genially not only helps children recognize numbers but also strengthens their symbolic and conceptual thinking skills from an early age.

CONCLUSION

Based on the research findings, it can be concluded that the use of the Genially interactive learning platform significantly improves the quality of the learning process for young children, particularly in fostering motivation, participation, and understanding of basic number concepts. This platform successfully captures children's attention and stimulates their enthusiasm for learning through engaging visuals, responsive sounds, and fun activities. Children become more focused, active, and engaged, and demonstrate a high level of curiosity throughout the learning process.

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