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Digital Play for Enhancing Language Learning in Early Grades

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Abstract

Teachers are unclear how to adapt pedagogical techniques in digital play to enhance language development for young children in the digital era and with the changes in early childhood education. The purpose of this study is to analyze how teachers understand the development and teaching of early childhood language in early grades with digital game media and special references for early grade students. Qualitative, interpretative research is employed. The researcher picked a Surabaya primary school with digital technologies for the study's participants. Eight elementary school teachers were also included in the research. Teachers' interactions with students while utilizing digital tools were studied via the use of semi-structured surveys and focus group interviews. In addition, it was recorded that bystanders saw these exchanges. The data utilized in this analysis takes into consideration instructors' perspectives on the value of information communication technology (ICT) in early education, the benefits of digital play, and the potential of digital pedagogy to foster better language acquisition. The study found that instructors were amenable to digital play-based learning. Educators' knowledge of digital games' potential to assist primary language learning is limited. Since today's children are digital natives, many instructors feel video games may help them acquire a second language. More effort should be placed into producing games that incorporate digital language-learning tools. Results also demonstrate that using digital games in the classroom is current. Before completely understanding the benefits of digital play in language instruction, we need further research on teachers' viewpoints, digital literacy, and behaviors.

Keywords: language development; digital technology; early childhood; teacher pedagogical beliefs.

Introduction

Digital play is an important components in the field of education (Lawrence, 2018). Where digital play have benefits for children, such as awakening working memory and planning skills. This is needed in the field of education, which will train the child's monotone to train language development. In addition, digital play are very interesting and interactive which is one of the added points of making digital play a learning medium (Gleason & Von Gillern, 2018). In language development, of course, it is necessary to choose good digital play that are used to educate children about language development. Language development can be taught through digital play, because it uses audio and visual which teaches children to learn language through audio from an early age. In training language development, it must be instilled from an early age to make it easier for children to memorize the language. In addition, it is expected to improve the quality of the next generation of the nation (Isikoglu Erdogan, Johnson, Dong, & Qiu, 2019). Thus digital play have the benefit of helping children's language development.

Research on the use of digital games for learning media has been discussed by several researchers such as Li & Chu (2021) who have conducted research related to children's involvement in digital games as a medium for learning to read with the effects of time, rewards, and challenges. In addition, research has also been carried out by Acquah & Katz (2020) with the topic discussed is digital games for language development in the second stage. Lindberg, Laine, & Haaranen (2019) has also conducted research on digital games in early grades on the problem of integrating technology and pedagogy in early childhood curricula. In Swedish, Magnusson (Magnusson, 2021) has conducted research on digital games used for literacy development of children in Swedish preschools. The results of these studies show that the interest of researchers is very high in digital games, however, once research related to the use of digital play for language development in lower grade

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elementary school students is still very difficult to find, some researchers only discuss digital play for early childhood or only discusses digital play for language development.

The primary goal of this research is to learn more about how teachers understand early childhood language development and teaching in early grades with digital game learning media. In addition, the purpose of this study is as a special reference to help early grade students learn the language. Here are some of the questions that were asked to help in this process: How can elementary school educators learn from and use digital play practices into their instruction of language to the earliest students?.

It is described as any sort of education that is assisted by technology, or that utilizes successful technology-based teaching methods (Ahmadi & Reza, 2018). These authors also suggest that social media websites like Facebook and Twitter, multimedia and productivity software like Microsoft Office, and even online games like Flash and QuickTime all fall under the umbrella of digital technologies. A physical, social, and cultural environment is offered to children in the Digital Age where they may learn and engage digitally (Chambers & Sandford, 2018).

Rather than just receiving information, teachers should take into account the fact that children learn best when they are actively engaged in the learning process. The foundations of integrated learning, which is based on games, are embedded into the autonomous learning curriculum for language instruction (Onishchuk et al., 2020). It's critical to know how to gain the necessary abilities and how these language skills help learners form effective connections with peers and older people since language development is a complicated problem made up of many components, including context.

The pedagogical technique has a basic challenge when it comes to incorporating language courses into classes based on games (Akour, Alsghaier, & Aldiabat, 2020). When considering early grades, this researcher believes that play pedagogy is especially important. As such, she proposes that instructors consider using digital games as a way to help early grades student learn languages.

This research provides teacher insight into language development for early grade students. With research, teachers can find out and understand the development and teaching of early childhood language in the early grades with digital game learning media. Teacher competence on language development can be increased with digital games.

Literature Review

Digital games have the potential to increase language learning for a huge percentage of youngsters who are already heavily involved in the digital environment. Digital divide and restricted access to gadgets and data prevent this from being true for all South African youngsters. Teachers' perceptions and usage of digital play were examined in this empirical research. It is commonly understood that early childhood education methods are shaped and supported by technology. 'The kid is the professional in their own digital play,' say Howe et al., (2022), referring to children's ability to discern variations in play between the digital world and the social one in which they live. All forms of play may be used with established pedagogies to provide a better learning experience, according to Arnott. Play must not be dominated by digital media. The current preschool system includes a variety of elements, including digital technology (Hoareau et al., 2021). Our South African setting allows for the inclusion of digital play as long as tablets and appropriate line digital games are readily accessible.

Virtual world creation in an online playground occurs when "many students are standing near to the resource and seeking to participate in some manner, even if they are not physically managing the device (Chen & Kent, 2020). It is believed that such an experience would lead to a wide range of social behaviors, which will influence how students engage with technologies (Volonte et al., 2020). There is now a digital gap in South Africa due to poverty, which restricts the availability of devices and data in the country. Mavoa et al., (2018) conducted research at the Olathe Unified School District's Harmony Early Childhood Center and discovered that a classroom activity named "The Journalist" showed how digital play helps youngsters learn and grow. For this assignment, teachers are expected to act as journalists by taking images and videos of students' activities on tablets. The students then debate an image that is shown on a wall or frame in front of them. In this way, communication abilities, such as the learner's capacity to remember a tale or answer a question, may be evaluated.

Children aged 5–8 at a 2-day session in Hong Kong utilized film-language to tell tales about their toy-playing stories and make a 1-minute movie (Van der Westhuizen & Hannaway, 2021). This illustrates that digital tools may be used to include digital technology into early childhood education curricula. Digital games, such as MIT Media Lab professor Mitch Resnick's 'ScratchJr,' which was released in July 2014, have been shown to greatly increase children's ability to sequence pictures in tales (Zanchi & Zampini, 2021).

In the Northern Hemisphere, children play with toys and digital media in the same way. Changing the appearance of images on a screen might be seen as a kind of symbolic play. (Sabrina, Siregar, & Sosrohadi, 2021). Children are no longer limited to drawing and writing on paper; they may also use images, movies, audio, graphics, and etc, which they can use either on their own or combine with conventional techniques (Cowan & Flewitt, 2021).

Because they have learned by doing, teachers often rely on more traditional methods of teaching, making it difficult for them to adjust to the new technologies that are being produced.

They may not know how to utilize digital technologies in the classroom, such as video cameras, to teach students how to use storyboards to communicate their tales (Van der Westhuizen & Hannaway, 2021). Consequently, their educational methods are based on experimenting with various technologies until they discover one that works. To assist teachers understand how technology is used by students, Chen & Kent (Chen & Kent, 2020) asked to better understand how digital technology can be integrated into the play of their students, especially those devices with displays, such as laptops and tablets. The teachers, on the other hand, are left to struggle with their fears about integrating modern tools into the classroom. When new technologies are introduced, some instructors face challenges, while others dispute the value of using these digital tools in pedagogy (Williamson, Eynon, & Potter, 2020).

To both conventional and digital play pedagogies, Piaget and Vygotsky's ideas on child development are significant, since these writers show that play is an important element of early children's development (Zanchi & Zampini, 2021). When children are 2 years old, Piaget claims, they are capable of demonstrating and re-enacting their daily experiences in three forms of games: a form of improvisation, a form of problem solving, and a form of play that is more like make believe. (Schall-Leckrone, 2018).

These sorts of play may be facilitated utilizing digital technology if it is understood that access to digital tools and data will be available. However, the digital gap, poverty lines, and lack of devices and data make this difficult in the Global South. Examples of functional and symbolic play may be seen during exploratory play (e.g. on tablet screens), when kids utilize their own imagination to fill in blocks, delete content (e.g. by sorting), and repeat patterns (e.g. by sketching or photographing items). Using digital technology while pretending to be someone or something else assists Grade R students to manage their emotions and practice new social skills. As a result, kids learn new values and acquire new linguistic abilities, which enrich their imaginations even more (Schall-Leckrone, 2018).

In addition, teachers may utilize digital technology to scaffold instructions in their teaching techniques since it is dynamic and intriguing with all of the visual and moving pictures (Schall-Leckrone, 2018). With the help of technology, play-based learning may be supplemented with easy-to-follow instructions (scaffolding) for students (Cowan & Flewitt, 2021).

According to Vygotsky, the concept of scaffolding is vital in understanding how children learn language because it empowers and encourages them to grasp what is said or done (Van der Westhuizen & Hannaway, 2021). When it comes to teaching, Vygotsky advocated a "scaffold pedagogical method," which he referred to as a "collaborative learning environment." (Bardige, Baker, & Mardell, 2021). Because it is designed by adults, it is founded on the idea that teacher–student contact is a one-way street. (Yu, Johnson, Deutsch, & Varga, 2018). The pedagogy of scaffolding may help students comprehend and communicate what they have learned to one another.

For this investigation, the bio-ecological theory of Murphy (2020) is crucial, since it provides an understanding of how schooling affects the lives of students and instructors alike across several systems. An exosystem, a macrosystem, a chronosystem, and an exosystem form the child's environment, according to Murphy (Murphy, 2020). However, other students and the real school are also considered part of the microsystem in this research, which is not only focused on the teacher. Students benefit from their input, questions, and explanations when it comes to promoting their own language learning. In the mesosystem, learners' past digitally experience of digitally play and language teaching interacts with the numerous microsystem actors and their variety. The exosystem may benefit from the inclusion of digital technology if it is available to the child's parents. For example, while listening and reading to tales on a tablet, they may play a critical role. The macrosystem consists of both instructors and students' cultural and political contexts. Family pretend games and performances are commonplace on cultural outings. Among the chronosystem's components are, for example, technological advancements like digital technology.

In today's digital world, the five systems link students, instructors, and the educational environment. Digital technology, teachers' pedagogical practices, and the accessibility of digital gadgets are all interconnected.

Methods

In this study using a interpretive approach, researchers observed and saw how early grade teachers viewed the use of digital games in language teaching for early childhood. To take advantage of the school's digital technology, the teachers took advantage of digital games and took early classes as research respondents to use the digital games provided by the school. Using Phillippi & Lauderdale (2018) principles for the qualitative methodology, the researchers collected data through interviews and observations.

Participant

Research in this case study was conducted with an early grade elementary school teacher in Surabaya. Schools that are used as research sites are those that have digital technology, such as tablets and laptops. Where digital technology can be accessed in early grades at selected schools, which are located in the Surabaya city area. The researcher collected data through focus group interviews in the initial class, non-participant class observations, seven semi-structured one-on-one interviews with the instructor, and follow-up focus group interviews. This is done to make it easier for researchers to draw conclusions, involving various observations.

Data collection

In this study, the data collection methods used were interviews and observation. Interviews were conducted when the observation activities had been carried out, the interviewees were teachers and early grade students. The length of the interview is 15-25 minutes depending on the answers of the interviewees presented. The purpose of the interviews addressed to early grade teachers was to find out how to adapt pedagogical practices in the development of digital games to improve early childhood language development. The purpose of the interview aimed at early grade students is to find out how students respond to digital games to improve language development. Interviews were conducted face-to-face at one of the elementary schools in Surabaya, because the number of respondents was small, namely the early class so that they were not worried about the spread of the Covid-19 virus. In addition to interviews, another method used is observation, with the aim of observing how the response when early grade students use digital games to improve language development.

Validity and Reliability of the Study

Quantitative research aims to generalize its findings to different contexts and circumstances, whereas qualitative research aims to transfer its findings to contexts with comparable characteristics (Castleberry & Nolen, 2018). In this investigation, external validity was guaranteed by the use of descriptive depth and judicious sampling. When doing qualitative research, as opposed to quantitative research, it is the responsibility of the researcher to persuade the audience of the importance and validity of the observations and data gathered during the study. The more the researcher's proficiency in this area, the greater the study's internal validity (Bokander & Bylund, 2020). Internal validity was maintained in the present study by the use of both expert evaluation and participant confirmation.

For qualitative studies to be reliable, the researcher must independently verify the findings (Rose & Johnson, 2020). This research used a rapid confirmation as its external reliability strategy.

Data analysis

Four stages of data collecting were involved. Phase 1 was the design phase, which involved the selection of participants, the research goal, and the construction of the data generating tools.

Interviews were conducted with a focus on early grade teachers and early grade student representatives who followed the practice of digital games, participatory observation in the classrooms of early grade students, audio recordings of post-observation comments and semi-structured individual interviews with teachers were all used to obtain data in this phase. 2 of this research project (Ahmed, Nordin, Shah, & Channa, 2018). The study also looked at how teachers used digital technology to help students learn language also how they responded to the students' comments. We took note of the teacher's advice to others on how to use digital technology to help them learn a language.

Recordings and interview transcripts were transcribed in phase 3 (Rutakumwa et al., 2020). Finally, during the feedback phase, the key results were shared with the participating early grade teachers. In addition, it is also given to the principal and the members of the elementary school management committee.

Questions on existing pedagogies for utilizing digital play to teach languages, how students react to such pedagogies, and suggestions for how to utilize digital play to improve language teaching served as the basis for the study. Coding and categorization, as well as the discovery of recurring motifs, were all part of this (Williams & Moser, 2019). Afterwards, the information was represented graphically, whether via tables or charts. After all the data had been processed and categorized, a final overall analysis of the results was generated (Ahmed et al., 2018). Data were triangulated to guarantee that they were accurate representations of the population at large.

Ethical Consideration

The researcher conducted the research openly, with the participants being well aware of all the necessary information about the study. The researcher tried to be as honest as possible in transcribing the recorded data so that it truly reflected what the participants said. Therefore, the necessary ethical clearance was obtained from principals, early grade teachers, early grade students, and parents/guardians of students. Since the work group consists of people under the age of 10, it is ethically important to include parents. Early grade teachers who agreed to take part in the study were made aware that their participation was completely optional and they could leave at any time. Early grade teachers and school administrators work together to reach an agreement. Maintaining privacy and confidentiality during and after research is a way for researchers to protect subjects.

Finding

The main issues guiding this research are: *How might language instruction in the early grades be enhanced by teachers' familiarity with and use of tactics gleaned from digital games?.* Following is a summary of the findings: In this study, we looked at four different aspects of digital play: (1) early grade teachers' understanding of their value, (2) how teachers and students apply it in their classrooms, (3) Individuals' points of view on the worth of digital gaming and (4) Techniques for teaching a foreign language by replaying digital games.

Teachers' knowledge of digital games

A focus group of eight instructors conducted at the outset of the project found that students are quite comfortable using digital devices and are frequently engaged in gaming activities on them. Teaching using technology was seen by two of the educators. Students soon began using the school's digital center's tablet computers. Other educators made use of digital resources such as PowerPoint presentations and YouTube videos in their lessons. During the semi-structured individual interviews, teachers expressed their want to learn more about how digital technology games may be used to help them teach language. In the words of participant 3:

'I just finished reading a piece on the benefits of digital games and media. It opened my eyes to the fact that people's attention spans are prolonged by the constant presence of fresh visual stimuli. Because they spend most of their time in front of a screen, particularly at home, they have become used to it. Traditional educational tools are challenging to hold their interest. They've become used to seeing a steady stream of visuals on a monitor.' (Participant 3, Teacher in grade R, April 2018)

Approach strategy for Language Teaching Instruction

Three Grade R students were seen utilizing digital technology in their language instruction, which was done in a variety of methods by the teachers. In order to help the students learn new words and sounds, more conventional teaching techniques including tales, illustrations, music, and flashcards were also employed. Individual interviews with five of the eight instructors revealed that they often included technology, such as tablets, mobile phones, laptops and projectors and displays, into their teaching methods. All three of the other teachers said they preferred to stick with tried-and-true methods of instruction. 'I use image and word flash cards' revealed participant 6. To help the students learn to recognize various animals, fruits, and other objects, I scan in images of these subjects (Participant 1, Grade Rteacher, April 2018). Teachers at the chosen school were given these photographs, and it became evident that most of them were not utilizing digital play to improve their students' language skills. It was said that there were no acceptable digital games available as the explanation for this.

Perceptions of digital play's educational value

Digital play for language acquisition may help students acquire reasoning communication skills, hand –eye coordination and the ability to perceive the world around them. They all agreed that removing digital media and play would leave the kids terribly missing it. Because digital play is a reality in today's environment, the youngsters would feel alone and unconnected.

Non-participant classroom observers found that digital gaming piqued the interest of students far more than conventional approaches did. This was obvious when students contextualized images on the screen with their past experiences and expressed their identification with them to the class. This was clearly shown. There are no aspects of a fun engagement in such an observation, which is a basic application of technology. Teachers have noticed that digital games are not explicitly suggested for inclusion in the curriculum, and there is little guidance on how to educate using digital games. Their findings, however, confirmed that digital play may be beneficial to children's learning.

Using digital games in the classroom may help students improve their language abilities and vocabulary, according to seven teachers who participated in the research. However, one participant expressed worries regarding the use of digital games to improve language skills. As a teacher who had never attempted to include digital games into her lesson plans, she couldn't see how they would be any more effective than the approaches she was already employing for her students.

Perceptions of the benefits of digital gaming in the study of a foreign language

Teaching techniques will have to alter in order to keep up with the demands of today's Digital Age, instructors agreed during their focus group session. They agreed that there was no way to go back to the old ways of teaching.

According to our class observations, digital games may help students learn arithmetic and life skills, in addition to helping with language instruction. It was via the use of digital play that three instructors were able to connect the teaching of language with the teaching of other topics, such as mathematics. Students had to use terms like "longest," "shortest," "larger," and "smaller" in a game on the tablet to complete particular patterns and sequence numbers. Teachers in Grade R praised digital play as a way to enhance language instruction since it motivates students to ask questions, build their vocabulary, and pay attention while playing.

Discussion

For sound and letter identification, pronunciation and vocabulary, instructors are relying on digital play techniques to a limited degree. Digital play approaches are new to teachers, but they are eager to learn more about them since they are accustomed to conventional play methods mandated by CAPS. The results of this research may be understood in terms of the ecological framework proposed by Murphy (Murphy, 2020). The researcher used the framework to get a better understanding of how the instructors had evolved in relation to the key elements of this phenomena. The outcomes of the investigation were extrapolated using this framework, which consists of five

interconnected systems. The important results are shown in this redesigned framework (Figure 1).

Microsystem

All of the students in the school are part of this microsystem, which is led by the instructor. Since the classroom device is also a microsystem for the teacher, it was evident that most children had been exposed to digital technology at home. Lesson planning includes the use of digital technology, but does not make use of digital pedagogy. Some of the kids were exposed to digital technology more than others, but the instructors also used it in the classroom to bring that knowledge from home into the classroom, enhancing the kids' tech exposure at home.

Mesosystem

Mesosystem deals with connections between students, teachers, and parents in microsystems, such schools and extended families. It was necessary to take into account the students' existing understanding of digital technology from their own homes, as well as the knowledge of the Grade R instructors on digital play. The instructor must create a teaching atmosphere that is favorable to learning by establishing homeostasis with digital technologies. To be fair, this technique was only used sparingly in this research.

Exosystem

Exosystem is defined as the community around a school, the school, and DBE's regional headquarters. In a manner, it expands the mesosystem by include a variety of social institutions that impact the person directly. Although parents aren't physically present at their children's school, they nevertheless have a significant influence on their children's attitudes about technology since the home is where they first encounter it. Every aspect of life beyond the classroom is dominated by digital technology. When students and instructors are linked to the exosystem via the use of proper digital pedagogies in class, particularly for language instruction, this is the sine qua non.

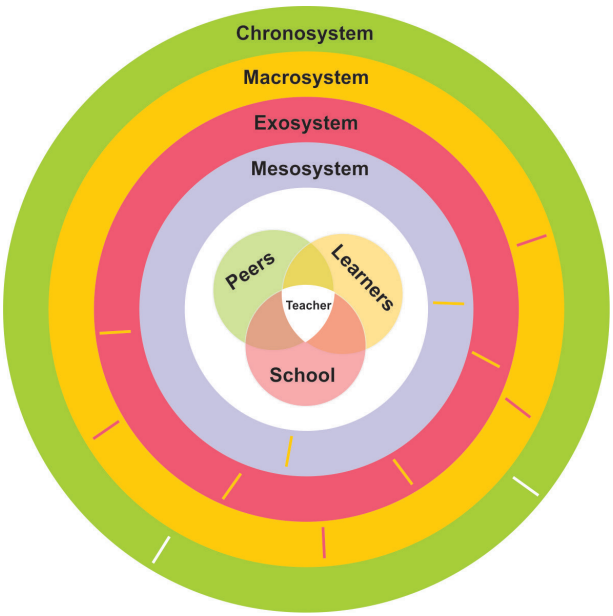

Fig. 1: Key results based on Bronfenbrenner's ecological theory.
Source: *personal documentation*

Macrosystem

The macrosystem is made up of the cultural and political views and values of the instructors. Because of the advent of AI and the Fourth Industrial Revolution, students will be exposed to a wider range of digital technology. Introducing digital pedagogies to language education in Grade R implies that students are exposed to this technological environment at an early stage. This study amply demonstrates how at ease young children are using digital technology, however the instructors in this study are sadly falling behind. Teachers may be "digitally proficient in their personal life, but a dominating philosophy surrounding play-based pedagogy impeded the incorporation of digital gadgets" in their teaching methods, this seems to be a widespread problem (Marklund, 2022).

Chronosystem

In the chronosystem, everything that has happened in the last several decades, including technological developments that have become the usual, is included. As the instructors at the school where this research was conducted realized the need of incorporating digital technology into their lessons, they set up classrooms with iPads and other tablet computers. However, despite the fact that they utilize them in a number of classes, they are hesitant to do so because they lack confidence in digital technology. There will be an increasing need for instructors to include digital play into their language instruction as this technology becomes more prevalent in students' daily lives. However, the researcher acknowledges that there is a dearth of appropriate digital content and associated pedagogic support.

With regards to digital play knowledge, these teachers were in accordance with results of Kinnula and Iivari (2019). Digital technology, as Hoareau et al., (Hoareau et al., 2021) explains, is a fact of life in the early teaching eco system, and instructors need to be knowledgeable and skilled in its principles. There are significant markers for the educator's digital learning proficiencies, according to Professional Framework for Digital Learning (Ovcharuk, Ivaniuk, Soroko, Gritsenchuk, & Kravchyna, 2020). When evaluating digital learning, it's important to look at things like whether students have a clear knowledge of their teacher's role and how they may best utilize digital learning tools to achieve their goals. It was the goal of the study to determine whether

or whether instructors were aware of digital play and to tie this to Murphy (Murphy, 2020), i.e., the interconnection of such technology for students and teachers. Tablets and PCs, smartphones, and digital games were found to have been used in the form of movies and tales in this study. These are arranged alphabetically according to (Ahmed et al., 2018; dela Pena-Bandalaria, 2020; Williams & Moser, 2019). Teachers agreed with Howe et al., (Howe et al., 2022) that digital play had a positive impact on students' comprehension of phonemic analysis as well as their ability to connect and communicate with others.

Even though tablets, projectors, and laptops were found to be widely utilized by six instructors throughout the sessions observed, the teachers are eager to learn more about the pedagogy of utilizing these devices for language learning and play. As Murphy (Murphy, 2020) explains, the instructor, the student, and the family constitute a mesosystem. According to the findings, digital pedagogies and the corresponding digital skills are essential. This is supported by Chen and Kent (Chen & Kent, 2020) who argue that instructors must be properly trained in the different digital technologies:

Digital technologies include the competence and understanding of electronic systems and data representations, the methods and production skills required to obtain and handle data, and the ability to produce digital solutions to problems. (page 251)

It was unanimously agreed upon by Van der Westhuizen and Hannaway (Van der Westhuizen & Hannaway, 2021) that technology should be included in the curriculum for children's growth and that educational techniques must be altered. It is possible for a teacher to tailor their instructional approach to the usage of digital tools, according to Van der Westhuizen and Hannaway (Van der Westhuizen & Hannaway, 2021). According to this study, teachers are often unprepared to effectively integrate digital pedagogical approaches into their classrooms.

According to the findings, teachers often combine traditional and digital pedagogical strategies, and they are open to exploring new digital tools and techniques for language instruction. According to Tohara (2021), appropriate literacy for everyone will be obvious in this digital world. It was also proposed by Kinnula & Iivari, (Kinnula & Iivari, 2019) to include a range of digital approaches to increase the engagement of young learners with such technology.

According to Marklund's (Marklund, 2022), digital play offers learners with various possibilities to expand their vocabulary while also aiding with sentence structure and a broad awareness of semantics. Research shows that students retain information better when they are actively involved in digital playing, which means they must listen and see what is occurring simultaneously on the screen. Schall-Leckrone (Schall-Leckrone, 2018) agrees with this result that technology aids with memory, understanding, and retention. Technology in the classroom helps students become more independent and supports their discovery, but it was clear from this study's findings that the students were not given the tools to do so since their professors did not actively promote it.

According to the findings of the study, instructors are very eager to incorporate technology into their lesson plans and improve their methods for teaching foreign languages. The digital age has given rise to new kinds of social stimulation and engagement (dela Pena-Bandalaria, 2020), therefore instructors must pick the right technology and develop the essential abilities so that students may play and learn languages with confidence.

Conclusion

In this study using digital game media and special references for early grade students, this study intends to assess how early grade teachers understand early childhood language development and teaching. Where early grade students need a lot of games and especially digital games in their language development. Nonetheless, there is a dearth of online resources and digital teaching aids. Students in the early grades are given new ideas on how to better prepare them for the demands of the digital world, especially in terms of language teaching and development.

Continuing our understanding of digital games in the context of language learning, this research offers new evidence for our growing knowledge. A better understanding of how digital games can be used to improve language acquisition can help improve learning and teaching, as this research shows. However, this study has limitations related to digital media where other schools that do not yet have adequate facilities will be left behind with teaching methods and language development with digital games. So this research can only be done by schools that already have complete or adequate digital media facilities.

With this research, it is hoped that the government and academics can help realize equal distribution of digital media or technology facilities to all schools in Indonesia. So that later it can be felt useful by every group, both by students, teachers, and guardians of students.

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References

Acquah, E. O., & Katz, H. T. (2020). Digital game-based L2 learning outcomes for primary through high-school students: A systematic literature review. *Computers & Education*, *143*, 103667.

Ahmadi, D., & Reza, M. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, *3*(2), 115–125.

Ahmed, E., Nordin, Z. S., Shah, S. R., & Channa, M. A. (2018). Peer Observation: A Professional Learning Tool for English Language Teachers in an EFL Institute. *World Journal of Education*, *8*(2), 73–87.

Akour, M., Alsghaier, H., & Aldiabat, S. (2020). Game-based learning approach to improve self-learning motivated students. *International Journal of Technology Enhanced Learning*, *12*(2), 146–160.

Bardige, B., Baker, M., & Mardell, B. (2021). *Children at the center: Transforming early childhood education in the Boston Public Schools*. Harvard Education Press.

Bokander, L., & Bylund, E. (2020). Probing the internal validity of the LLAMA language aptitude tests. *Language Learning*, *70*(1), 11–47.

Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, *10*(6), 807–815.

Chambers, F., & Sandford, R. (2018). Learning to be human in a digital world: a model of values fluency education for physical education. *Sport, Education and Society*.

Chen, J. C., & Kent, S. (2020). Task engagement, learner motivation and avatar identities of struggling English language learners in the 3D virtual world. *System*, *88*, 102168.

Cowan, K., & Flewitt, R. (2021). Moving from paper-based to digital documentation in Early Childhood Education: democratic potentials and challenges. *International Journal of Early Years Education*, 1–19.

dela Pena-Bandalaria, M. (2020). Impact of ICTs on open and distance learning in a developing country setting: The Philippine experience. *International Review of Research in Open and Distributed Learning*, *8*(1), 1–15.

Gleason, B., & Von Gillern, S. (2018). Digital citizenship with social media: Participatory practices of teaching and learning in secondary education. *Journal of Educational Technology & Society*, *21*(1), 200–212.

Hoareau, L., Thomas, A., Tazouti, Y., Dinet, J., Luxembourger, C., & Jarlégan, A. (2021). Beliefs about digital technologies and teachers acceptance of an educational app for preschoolers. *Computers & Education*, *172*, 104264.

Howe, N., Paine, A. L., Ross, H. S., & Recchia, H. (2022). Sibling relations in early and middle childhood. *The Wiley-Blackwell Handbook of Childhood Social Development*, 443–458.

Isikoglu Erdogan, N., Johnson, J. E., Dong, P. I., & Qiu, Z. (2019). Do parents prefer digital play? Examination of parental preferences and beliefs in four nations. *Early Childhood Education Journal*, *47*(2), 131–142.

Kinnula, M., & Iivari, N. (2019). Empowered to make a change: Guidelines for empowering the young generation in and through digital technology design. *Proceedings of the FabLearn Europe 2019 Conference*, 1–8.

Lawrence, S. M. (2018). Preschool children and iPads: Observations of social interactions during digital play. *Early Education and Development*, *29*(2), 207–228.

Li, X., & Chu, S. K. W. (2021). Exploring the effects of gamification pedagogy on children's reading: A mixed-method study on academic performance, reading-related mentality and behaviors, and sustainability. *British Journal of Educational Technology*, *52*(1), 160–178.

Lindberg, R. S. N., Laine, T. H., & Haaranen, L. (2019). Gamifying programming education in K-12: A review of programming curricula in seven countries and programming games. *British Journal of Educational Technology*, *50*(4), 1979–1995.

Magnusson, L. O. (2021). Digital technology and the subjects of literacy and mathematics in the preschool atelier. *Contemporary Issues in Early Childhood*, 1463949120983485.

Marklund, L. (2022). Swedish preschool teachers' perceptions about digital play in a workplace-learning context. *Early Years*, *42*(2), 167–181.

Mavoa, J., Carter, M., & Gibbs, M. (2018). Children and Minecraft: A survey of children's digital play. *New Media & Society*, *20*(9), 3283–3303.

Murphy, M. C. (2020). Bronfenbrenner's bio-ecological model: a theoretical framework to explore the forest school approach? *Journal of Outdoor and Environmental Education*, *23*(2), 191–205.

Onishchuk, I., Ikonnikova, M., Antonenko, T., Kharchenko, I., Shestakova, S., Kuzmenko, N., & Maksymchuk, B. (2020). Characteristics of foreign language education in foreign countries and ways of applying foreign experience in pedagogical universities of Ukraine. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(3), 44–65.

Ovcharuk, O., Ivaniuk, I., Soroko, N., Gritsenchuk, O., & Kravchyna, O. (2020). *The use of digital learning tools in the teachers' professional activities to ensure sustainable development and democratization of education in European countries.*

Rose, J., & Johnson, C. W. (2020). Contextualizing reliability and validity in qualitative research: toward more rigorous and trustworthy qualitative social science in leisure research. *Journal of Leisure Research*, *51*(4), 432–451.

Rutakumwa, R., Mugisha, J. O., Bernays, S., Kabunga, E., Tumwekwase, G., Mbonye, M., & Seeley, J. (2020). Conducting in-depth interviews with and without voice recorders: a comparative analysis. *Qualitative Research*, *20*(5), 565–581.

Sabrina, A., Siregar, I., & Sosrohadi, S. (2021). Lingual Dominance and Symbolic Power in the Discourse of Using the PeduliLindungi Application as a Digital Payment Tool. *International Journal of Linguistics Studies*, *1*(2), 52–59.

Schall-Leckrone, L. (2018). Coursework to classroom: Learning to scaffold instruction for bilingual learners. *Teacher Education Quarterly*, *45*(1), 31–56.

Tohara, A. J. T. (2021). Exploring Digital Literacy Strategies for Students with Special Educational Needs in the Digital Age. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(9), 3345–3358.

Van der Westhuizen, L. M., & Hannaway, D. M. (2021). Digital play for language development in the early grades. *South African Journal of Childhood Education*, *11*(1), 1–8.

Volonte, M., Hsu, Y.-C., Liu, K.-Y., Mazer, J. P., Wong, S.-K., & Babu, S. V. (2020). Effects of interacting with a crowd of emotional virtual humans on users' affective and non-verbal behaviors. *2020 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*, 293–302. IEEE.

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review*, *15*(1), 45–55.

Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, Vol. 45, pp. 107–114. Taylor & Francis.

Yu, M. V. B., Johnson, H. E., Deutsch, N. L., & Varga, S. M. (2018). "She calls me by my last name": Exploring adolescent perceptions of positive teacher-student relationships. *Journal of Adolescent Research*, *33*(3), 332–362.

Zanchi, P., & Zampini, L. (2021). The Narrative Competence Task: A standardized test to assess children's narrative skills. *European Journal of Psychological Assessment*, *37*(1).