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Optimizing Digital-Based Learning to Improve Alpha Generation Psychomotor Skills

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Abstract: Teachers are the main component in the learning process at school that determines the success of their students. The learning process occurs when interaction between teachers and students or vice versa is produced by changes in behavior in the form of new knowledge, strengthening insight and experience. The utilization of digital media in learning is required to be able to have an impact on the development of the alpha generation who are most familiar with the internet of all time. this research uses the literarure review method to thoroughly explore the effect of digital game-based learning media to improve the psychomotor abilities of the alpha generation. There are 10 journals used by researchers, most of the studies were conducted in Indonesia. The results of the research on the use of digital technology in learning have opened up new opportunities to improve interactivity, engagement and learning effectiveness. Alpha generation, born in the era of advanced digital technology, has high adaptability to technology. This allows them to more easily adapt to digital-based learning.

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Introduction

In general, national education functions to develop students' potential to become prosperous citizens. This is regulated in UURI No. 20 Th. 2003 Chapter II Article 3, which is about the National Education System. The function of National Education is to develop the ability and shape the character and civilization of a dignified nation in order to educate the nation's life. Meanwhile, the purpose of National Education is to develop students' potential to become human beings who are faithful and devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent and become democratic and responsible citizens (Rizky Arista Wibowo, 2019).

Teachers are the main component in the learning process at school that determines the success of their students. The learning process occurs when interaction between teachers and students or vice versa is produced by changes in behavior in the form of new knowledge, strengthening insight and experience. During the teaching process, teachers must also have a learning model or role that can transfer their knowledge. The learning model can also facilitate the learning process and make it easier for students to understand the material delivered by the teacher (Widodo, 2020).Education for children has a profound and lasting

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effect on their physical, mental, social and emotional development. As a whole, a child's education does not just fill the insights in their minds, but also shapes the ethics, perspectives, and skills that will guide them to become independent, moral, and successful individuals in various dimensions of life (Hafizah, 2023).

In recent times, the idea of Society 5.0 has emerged with a focus on people, or human centered, and the application of technological fundamentals that are and will continue to evolve. To overcome the current stagnation and build a progressive society, the concept of Society 5.0 is being transformed. This idealized view is thought to build strong relationships between individuals so that they can respect each other and organize their lives in an active and enjoyable manner. A 21st century professional teacher is a teacher who is skilled in teaching, able to build and develop relationships between teachers and schools with the wider community, and a learner as well as a change agent in schools. Generation Alpha are the children of the millennial generation born after 2010. They are the most internet-familiar generation of all time. The generation that is most familiar with digital technology and the generation that is claimed to be the most intelligent than previous generations. Nonetheless, they are considered to have shortcomings, such as: bossy, dominant, and controlling; dislike sharing; unwilling to follow rules; technology is part of their lives, and would not know a world without social networks; and the ability to communicate directly is much reduced. On the other hand, digital media offers vast opportunities and provides positive benefits, in addition to digital risks. This is where the role of teachers is needed (Widodo, 2020).

In addition, the Global Digital Report (2018) is remarkable. In addition, several factors relating to internet usage in Indonesia are of interest. First, from the perspective of the device-or devices-used to access the internet. 60% of the 132 million Indonesians who use the internet use smartphones-also known as smarphones-to access the internet. The facts of society support this. Owning a smartphone today is very easy for people. These facts and data show how rapidly digital technology is developing in Indonesia. Although the survey did not include young children, the facts of society show that children are highly engaged with the digital world. Let's not be too pessimistic. We should remain optimistic that the digital world will offer many advantages for developing aspects of early childhood. Moreover, when faced with the educational challenges of the 21st century Alpha therapy including technology, information and communication literacy.

Based on this explanation, the teacher as the subject of learning can certainly utilize digital media as a learning medium for the object of research. The tendency of teachers to apply traditional learning models is certainly no longer in accordance with the development of learning, especially the application of learning to children, children as the object of research, of course, the development of their thinking skills is also influenced by the learning methods applied. the use of digital media in learning can also affect the development of children's thinking skills. Digital media can make learning more interesting and interactive, so it can increase children's learning motivation. In addition, digital media can also expand children's access to information and allow them to learn independently.

Utomo, said that in the rapidly growing digital era, the role of information and communication technology has changed almost every aspect of life, including education. Technological advances bring profound changes in the learning paradigm, encouraging the use of innovative and interactive learning media to increase the effectiveness of learning

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amid the challenges of the times. Education must adapt to these changes, accommodating the demands of a digital society that increasingly relies on technology (Utomo, 2023).

The use of digital media can also have a significant impact on children's development, including in the psychomotor domain. The use of well-designed interactive apps or games can help improve children's fine and gross motor coordination. For example, through games that require the use of fingers to move objects or solve puzzles, children can practice their fine motor skills.

In addition, the use of digital media can also help children develop visual-spatial skills, such as in games that require them to understand and respond to visual information in a virtual environment. Thus, the proper use of digital media can be an effective means to improve various aspects of child development, including in the psychomotor domain. Tina 2020, argues that in today's digital era, gadgets are very popular objects for millennial children today. Almost most of the time children spend playing with gadgets. This cannot be avoided. The presence of gadgets is not always bad for children. If gadget play is done wisely, it will stimulate children's motor development, train critical thinking and stimulate children to be more creative. (Putriyanti & Tina, 2020).

Psychomotor development or commonly abbreviated as motor development is an ability that prioritizes physical skills but through movement activities in cooking other potentials are also developed, such as cognitive is a facet of ability related to knowledge, reasoning or thought and affective is an ability that prioritizes feelings, emotions, and reactions that are different from reasoning. (Ariani, 2017).

Psychomotor behavior requires fugsisonal coordination between the neuronmuscular system (innervation and muscles) and psychological functions (cognitive, affective, and conative). There are two main types of psychomotor behavior that are universal and must be mastered by every individual in infancy or early childhood, namely walking and holding objects (prehension). These two types of psychomotor skills are the basis for the development of more complex skills as we know them as playing and working. (Makmum, 2007).

This psychomotor development is influenced by the two developments of gross motor and fine motor in daily life. Motor development is the control of the process of organ function that causes movement. Motor development can affect the ability of a person in infancy to move. If there is limited movement, it is difficult for him to carry out daily activities, so he always depends on others. In order to be able to carry out daily activities, fine and gross motor activeness is required in order to function, to fulfill these expectations, training in movement and activity is needed. (Sartika, 2013). Based on the explanation above, this research seeks to see previous studies to determine the effect of digital game-based learning media to improve the psychomotor abilities of the alpha generation..

Methods

This research uses the literarure review method to thoroughly explore the effect of digital game-based learning media to improve the psychomotor abilities of the alpha generation. There are 10 journals used by researchers, most of the research was conducted in Indonesia. The author searches for journals related to the influence of digital game-based learning media to improve the psychomotor abilities of the alpha generation. Journal searches were conducted using Google Scholar, Garuda Portal and Biomedcentral. The articles used were in Indonesian and English full-text articles. All journals related to digital game-based

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learning media to improve psychomotor skills in tabular form were then reviewed, analyzed, looked for similarities (compare) and dissimilarities (contrast), conducted or criticized and finally made a summary.

Research Results And Discussion

The results of this study using keywords and some article restrictions as above, the number of articles that have been found totals 8 relevant articles. All of these journals are related to the keywords set by the researcher. Table 1 is the result of the literature found by the researcher.

Research Results

Tabel 1 Result of The Literature

Authon and Year	Review Titles	Result
Reni Ardiana, 2023	Implementation of ICT-Based Media for Early Childhood Learning	Teachers are expected to know information about the influence of the development of science and technology for early childhood, the development of introducing science and technology in early childhood is information provided by parents and teachers or educational institutions in order to anticipate the era of technology and information that is starting to be implemented in the world of education. Teachers can utilize advances in the field of information technology for the benefit of learning activities also require consideration. (Ardiana, 2023)
Lukman Hakim Muhaimin, Dadan Dasari, 2022	Profile of Digital Literacy Skills of Elementary School Students in the Use of Distance Learning	The results showed that SD N 1 Brajan students have a relatively good level of digital literacy, students know the benefits of digital media used as learning media, such as knowing the benefits of the media features used to practical benefits. Meanwhile, in applying digital media, students are also able to use it as a learning medium. This is because students are accustomed to using the media in their daily lives, while some students have difficulty applying digital media for the reason that the Hand Phone they use is still alternating with parents, so the infrequent use of digital media will affect students' digital literacy skills. The efforts that teachers can make to improve students' digital skills are to provide learning media that can provide additional learning in the use of learning media that is unfamiliar to students. (Lukman Hakim Muhaimin, 2022)
Dewi Hendranigrat, Pujiyanti Fauziah, 2022	Digital Learning Media for Children's Fine Motor Stimulation	The result of this study is that digital media in the form of video tutorials has a significant contribution to improving the fine motor skills of children aged 3-4 years (with a sig (2-tailed)

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Authon and Year	Review Titles	Result
		value of 0.03). The media has also been declared feasible by two experts and practical according to the assessment of teachers as users. The implication of this research is that technology education training is needed for prospective teachers to have better preparation when teaching using technology. (Hendraningrat & Fauziah, 2022)
Syarifuddin, 2019	Development of an android-based digital book to stimulate students' psychomotor skills	The results showed that the development of android-based digital book to stimulate students' psychomotor has been successfully developed. The success of this development is based on the analysis of the needs and objectives to be achieved, the alpha stage assessment of the average score is in the very feasible category with a total score of 3.4 by two material experts, and 3.4 media experts. As for the limited class trial of 6 students / I included 3.5 very feasible categories. The increase occurred during the large group trial of 30 students / MAN 1 Pidie Class X IPA 3.67 with a very feasible category.The digital book application has multimedia elements so that it invites user interest. Layout design and ease of access make students comfortable with this application. In addition, the limitations of this application are because it was developed for one material and does not see the effectiveness or see an increase in learning outcomes. (Syafruddin, 2019)
Aini Indriasih, Sumaji, Badjuri, Santoso, 2020	Development of E-Comic as Learning Media to Improve Early Childhood Life Skills	The results showed that e-comic learning media is feasible to be applied in learning to improve early childhood life skills. Quantitatively, the assessment of the material expert is (3.87) in the good category. The expert assessment is based on the suitability of the curriculum, the correctness of the content and the way of presenting the material is included in the good category), and the media expert assessment obtained a score (4.0) media expert assessment based on production considerations, visual design, and technical quality, score (4.0) in the good category. While the assessment given by students at the field test stage (3.88), wider field test (3.99), and operational test (3.91), the acquisition of these scores indicates that e-comic learning media is in a good category, which means that e-comic

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Authon and Year	Review Titles	Result
		learning media is effectively used to improve early childhood life skills. Qualitatively, e-comic media as a learning media to improve life skills is able to attract students' attention to learning, facilitate student learning, and stimulate students to remember the material more easily. (Aini Indriasih, Sumaji, Badjuri, 2020)
Aji Laksono Putro, Bambang Sujatmiko, 2018	Development of animated video-based learning media to improve students' cognitive and psychomotor abilities in moving image capture subjects at SMK Negeri 3 surabaya.	The results showed that the learning outcomes through animated videos each obtained results of 85.71% complete on cognitive abilities and 100% complete on psychomotor abilities. In addition, the results showed a positive correlation between cognitive and psychomotor abilities with a value of 0.613 with a strong relationship level. With this Ha (alternative hypothesis) is accepted and H0 is rejected. (Putro Aji Laksono, 2016)
Agustina Dwi Kusumawat, Aditya Prapanca, 2023	Development of website-based learning media with project-based learning models in basic computer network engineering and telecommunications subjects at SMKN 7 surabaya.	The results of the product validation assessment show that the results of media development get a percentage of 84% (very valid), while for the results of the hypothesis test analysis obtained sig. (2-tailed) = 0.00 where the results are <0.05 so that H1 is accepted (H0 is rejected) and it is concluded that there is a significant influence on student test results (cognitive and psychomotor) through the use of website-based learning media. There is also an increase in student test results as indicated by the N-Gain results with the average value of the control group in the medium category and the experimental group in the high category. Thus, it is concluded that students' cognitive and psychomotor abilities can be improved through the use of website-based learning media. (Agustina Dwi Kusumawati, 2023)
Ari Nurwidiyanti, Prima Mutia Sari, 2022	Development of Flipbook Learning Media Based on Science Literacy in Elementary School Science Learning	The results of media expert validation with an average percentage score of 91% very feasible category and the results of material expert validation with an average percentage score of 100% very feasible category. Based on the trial, the score of the students' response was 92% with a very good category and the teacher's response was 93% with a very good category. The results of the science literacy exercises showed that 89% of students mastered the indicators of scientific

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Authon and Year	Review Titles	Result
		phenomena, 71% of students mastered the indicators of interpreting data and evidence scientifically and only 8% of students mastered the indicators of evaluating and designing scientific questions. The results of this study indicate that science literacy-based flipbook learning media are feasible as learning media to help students and teachers in the learning process and improve students' science literacy skills. (Ari Nurwidiyanti, 2022)

Discussion

Psychomotor is defined as a physical activity that is related to mental and psychological processes. Psychomotor is related to actions and skills, such as running, jumping, painting, and so on. In the world of education, psychomotor is contained in practical subjects. Psychomotor has a correlation with learning outcomes achieved through muscular and physical manipulation. (Toto Haryadi, 2015).

Psychomotor ability is the ability to use the muscles of the body in performing physical activities. It involves coordination, fine motor skills, speed, accuracy and muscle strength. In an educational context, psychomotor abilities are often measured through a person's ability to perform physical or practical tasks, such as writing, drawing, or operating certain tools. Psychomotor skills are also important in many professions, including sports, arts and technical fields. Psychomotor development is an important development to develop, one of its functions is to hone a child's fine and gross motor skills.

Generation Alpa, who was born between 2010 and 2020, is certainly familiar with technology-based media, especially the emergence of smartphones as a means of information and communication. The presence of technological media certainly has a significant impact on the learning process. Aransyah, (2023) argues that advances in science and technology have affected the use of teaching aids in schools and existing educational institutions. For schools that are advanced and capable, they have used these tools to become teaching and learning aids in the classroom with all subjects that students will learn, so that learning is more effective and efficient. (Ade Aransyah, *et. al*, 2023).

The literature review above shows that the use of technological media in learning shows very significant benefits, from eight articles showing that technological media is able to stimulate and improve the psychomotor abilities of the alpa generation, as found by Aji Laksono Putro, Bambang Sujatmiko, learning outcomes through video animation each get results of 85.71% complete on cognitive abilities and 100% complete on psychomotor abilities. In addition, the results showed a positive correlation between cognitive and psychomotor abilities with a value of 0.613 with a strong relationship level. With this Ha (alternative hypothesis) is accepted and H0 is rejected.

The literature study also confirms that the use of technological media in learning is very important, especially for the alpa generation born between 2010 and 2020. The usefulness is not only as a facility but the media can stimulate the psychomotor abilities of

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students to develop, especially during these times, the alpa generation is more interested in implementing learning with digital media.

The crucial factor that can affect the learning process is the application of interactive learning media, teachers as learning facilitators can certainly develop learning media as interesting as possible, so that learning and learning processes become active creative and innovative, especially the use of digital-based media can contribute more to improving the psychomotor abilities of the alpa generation.

Conclusion

Summary. Digital learning can help improve the psychomotor skills of the Alpha generation through the use of simulations, interactive games and applications that require physical interaction. The use of digital technology in learning has opened up new opportunities to improve interactivity, engagement and learning effectiveness. Alpha generation, born in the era of advanced digital technology, has high adaptability to technology. This allows them to more easily adapt to digital-based learning.

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