

Feasibility Study of Artificial Intelligence Based Parenting Strategies

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Abstract: The current development of globalization has had a positive impact on the development of science and technology. Current technological developments will never end, moreover technology has become a symbol that is part of the needs and trends of people's lives. The research aims to see the feasibility of artificial intelligence-based parenting strategies. Research using descriptive research methods. Parenting types and patterns that are different from one another, and in its application in creating independent and social generations cannot only apply one type of parenting pattern. AI can be a parenting strategy that can be applied to children, where the advantage is that it can easily provide self-knowledge and learn about the surrounding environment. The results of the study show that AI in parenting strategies can be applied in monitoring, controlling and controlling the use of gadgets. Children as the next generation are expected to be able to adapt to the developments in science and technology that will occur in the future. This educational platform makes it easy for teachers to create a more interesting learning atmosphere for children. Applications and platforms that can be useful in imparting self-knowledge and the surrounding environment to children are Google Family, Screen Time, YouTube Kids, Apple Education, Microsoft Education Center and Google Classroom.

Keywords: Feasibility, Parenting, Strategies, Artificial Intelligence, Technological.

1. Introduction

The current development of globalization has had a positive impact on the development of science and technology. Current technological developments will never end, moreover technology has become a symbol that is part of the needs and trends of people's lives. Most human activities are supported by technology, some of which are the use of technology in the field of education. Currently, education has used technology a lot, this is because it makes it easier to obtain information, technological developments make one's knowledge develop with the breadth of information available. not only for the purpose of seeking information, today's technology has developed a lot to help the performance of employees and learning in schools. One example of technology is artificial technology known as AI. AI is referred to as technological intelligence because of its extensive knowledge and information that is also very broad so that whatever information is needed by someone will be obtained from this technology.

Technological intelligence, also known as smart technology, is the use of technology that is integrated with artificial intelligence and the ability to learn, adapt

to the environment and interact with other users. Technological intelligence (or commonly known as AI or artificial intelligence) is a branch of computer science that deals with the development of machines and computer systems capable of performing tasks common to human intelligence, such as facial recognition, natural language, decision making, and so on. Technological developments are becoming increasingly important as more and more data is generated by digital devices such as sensors, software, and the Internet of Things (IoT). Artificial intelligence appears because of the development of information and communication technology (ICT) in recent years. In addition, the growth in the use of the internet and increasingly sophisticated mobile devices is an important factor behind the growth in the use of smart technology.[1]

Technology provides many advantages, such as simplifying and speeding up work processes, increasing efficiency, saving energy and increasing comfort and safety in everyday life.[2] Every technological development always promises: change, progress, convenience, productivity, speed, and popularity. However, a number of problems also arise from the use of technology, such as data privacy and security, unfair use of technology, and possible environmental impacts caused by the use of technology, production and use of smart technology devices. In a broader context, the emergence of the world of technology also raises a number of ethical and moral questions about the use of

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technology and its impact on society and the environment.

The use of technology is also influenced by students at SDN xxx. Where they can become dependent on existing technology, making it difficult to live their daily lives. Dependence on technology also triggers mental health problems such as anxiety and depression. Therefore, it is important for parents to monitor and regulate the use of technology among children so that they can use technology in a way that is healthy and conducive to their development. intelligence _ _ Artificial intelligence among children is an important topic and much discussed because of its impact on the development of children and adolescents. In today's digital era, technology has become part of everyday life and is increasingly accessible to children through various electronic devices such as smartphones, smart phones, tablets, laptops, and so on.

Currently parenting strategies have been implemented by a number of communities, one of which was in previous research conducted by Fadhilah Hayati Hasan that the effects of excessive use of technology can shape Sibling Rivalry behavior in a person, this occurs due to quarrels between relatives or friends, the influence exerted by friends or relatives, and behavior to get parental attention. So it is necessary to care for elementary school children in the use of technology. So the authors are interested in conducting research with the aim of finding out how the feasibility of artificial intelligence-based parenting strategies forms.

2. Materials and Methods

2.1. Research design

Research using descriptive research approach. Descriptive research is research that describes both natural and man-made phenomena. Phenomena in form, function, properties, changes, relationships, similarities and differences.[3]

2.2. Data Collection

Data collection techniques through observation (observation), interviews and librarian studies. Primary data is information obtained directly from the subject by using measuring instruments or search tools data.[4] The primary data used in the research are suggestions, responses and assessments from informants. Secondary data is data collected directly from primary sources as Supporting documents can be in the form of documents.[5] Secondary data in research is literature related to the issues discussed.

The time and location of the research was carried out at SD Negeri XXX Kota XXXX from May to June 2023.

The research subjects were attributes or characteristics of people. Meanwhile, the object of research is an object or activity that has certain variables that are determined to be studied and conclusions can be drawn.[6] The subjects in the study were students who attended SD Negeri XXX Kota XXXX. Furthermore, the object of research is artificial intelligence-based parenting strategies. The research flow is shown in Figure 1 below.

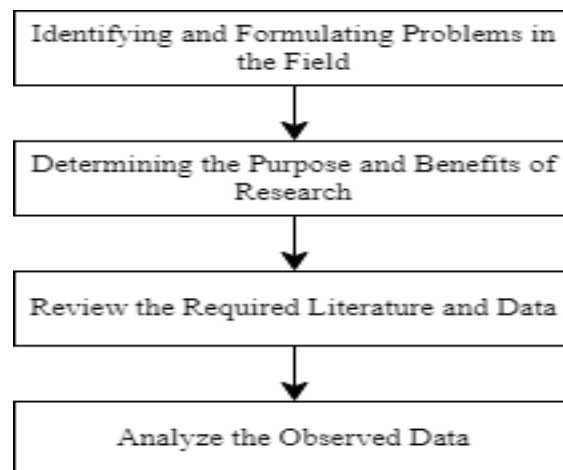


Fig. 1. Descriptive Research Flow

3. Results And Discussion

3.1. Problem Analysis

The researcher carried out analytical activities related to the care of grade 1 students studying at SD. Analysis is carried out to look for problems that occur in the field in various aspects.

The application of AI in the field of education can help teachers and children through intelligent and specialized tutoring system facilities. One of them is chatbots in language education and robot kits in studying computer science.[7,8] AI applications are able to facilitate collaborative learning based on automatic computerization. AI applications are also able to evaluate, know emotions, and recommend useful materials for students. AI is very useful when applied to learning for children, but the integration of AI technology needs to be discussed further.[9] The AI used for students is personalized according to the abilities of each individual. AI can detect the limits of student abilities so that they are able to find learning methods that are preferred and in accordance with the student's capacity. AI is then expected to be able to make adjustments and find new ways to assist student learning activities.[10]

Parenting for children in [11] is divided into 3 (three) categories including authoritarian parenting, democratic parenting, and permissive parenting. Authoritarian parenting is carried out with parents who make all decisions while children must obey and follow all the rules made by authoritarians (parents), if they do not do

this the child will be punished. This parenting style is very strict which limits not only the child's activities but also the affection that is given. Democratic parenting is applied through caregivers who provide freedom for children so that they can show their abilities without depending on their parents. This parenting style provides space for children to contribute in making decisions about their lives. Furthermore, permissive parenting style gives unlimited freedom to children for their life decisions, parents do not give control or punishment for them. Each parenting style has advantages and disadvantages. Every child has a different emotional state when faced with certain problems. Situationally, there are certain conditions that require caregivers to act authoritarian, democratic or permissive. Caregivers cannot choose one type of pattern in caring for children. In addition to parenting, another thing that needs to be considered is an environment that can stimulate children's creativity to develop.

Parenting of children has many problems. One of them is setting the time to play, study, and other activities. Technological developments facilitate the dissemination of knowledge. Parenting based on the development of artificial intelligence can be a solution to this problem. The use of gadgets has a positive impact on children such as; develop children's abilities and increase knowledge and information, train creativity using technology, adapt to developments time and expedite communication . The use of gadget technology can also have a negative impact on children, according to,[12] as follows:

1. The child's concentration decreases, because the child's focus is divided when carrying out learning. They reminisce about playing games.
2. Lack of literacy in writing and reading, the use of gadgets by children only focuses on images and sounds.
3. Lack of socializing or introverted, easy access to information makes children antisocial and individualism.
4. Disturbed rest hours, children who are addicted to gadgets will play before going to bed so that they become insomnia.
5. Children's health will be disrupted when exposed to radiation continuously.
6. Children's behavior is influenced by various things they see on social media, both positive and negative.

One case of technology abuse is to be more precise using the WhatsApp application. Figure 2 below shows a conversation conducted by an elementary school student who made threats against his friend.

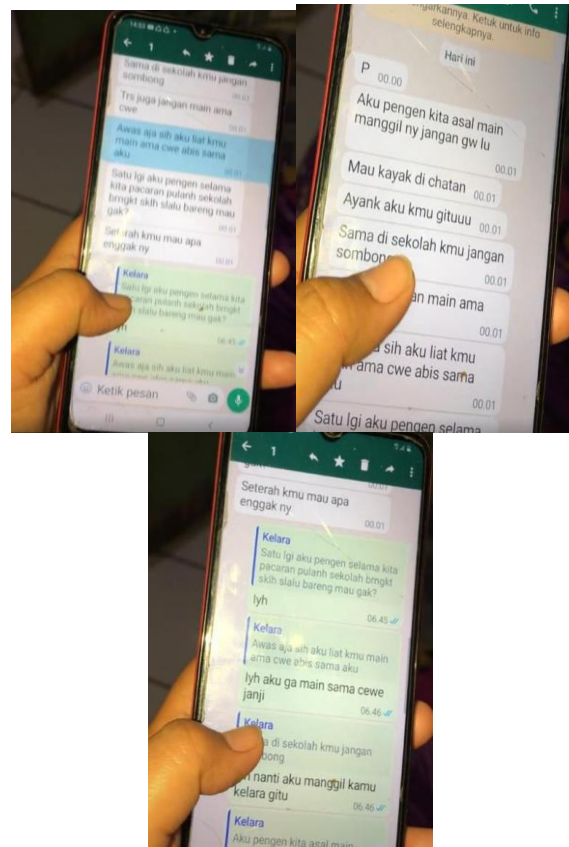


Fig. 2. Misuse of Technology

The picture shows a student threatening her friend not to play with other friends. Technology that should be a tool that makes it easy to communicate is instead used as an intermediary to provide threats. Student A said "Watch out, I see you playing with girls after me." This was a threat given to student B. This case explains that there are many possibilities for misuse of technology by children.

Other examples of misuse of technology by children are violence and pornography. The ease of accessing information increases the risk for elementary school children in accessing pornographic content. Children who are given too much freedom without control and control will end up in children who easily access these pornographic sites. Exposure to pornography in early childhood will have an impact on children's mental and physical health, such as: damaging the brain, pornography addiction will have an impact on shrinking brain tissue if done continuously the brain will experience a permanent reduction in size. In addition, children who are addicted to pornography will find it difficult to focus while carrying out learning activities. Children who are always exposed to pornography are very likely to become perpetrators of sexual violence in the future, because they have sexual deviations and have a high desire to take action.[13]

Children are in a phase where they imitate the behavior and actions of people around them. Imitation is not only

passive but also based on the interactions they carry out.[14] Mentally, children's defenses are so weak that they are easily influenced. If children see violence too often without filter, control, and control from their parents, the child will be affected. Violence also provides a strong attraction to influence one's actions, the visualization of violence seen by children there is a high possibility that it can be applied by children, so that children become perpetrators of acts of violence in existing cases.[15] This argument is also strengthened by [16] that the visualization of violence seen by children can affect the formation of the child's character.

3.2. Applications Supporting Children's Learning and Development

The parenting strategy that can be applied is AI (Artificial Intelligent) which limits the duration of use and content viewed by children. Discretionary screen time (DST) is the time when children see gadgets or other technological devices that should be used for learning. Here are some applications that can be used as an effort to limit the duration of use and content that children see to prevent this from happening d discretionary screen time or DST:

a. Google families

Using the Google family starts with installing the application. Next, select the google child to be connected after that you will get the code. The application is opened then select the link for the child and the select device option. Select the child's Google account and enter the code link obtained. After these steps are taken, parents have the authority to regulate access to applications on children's smartphones.[17] Google family has a feature that gives authority to parents to limit what applications children can access. Another feature is limiting the duration of children accessing an application, if the duration is up the application will automatically lock. Finally, a feature to control the use of the device via a key. [18] The following is a feature image found on the Google family.

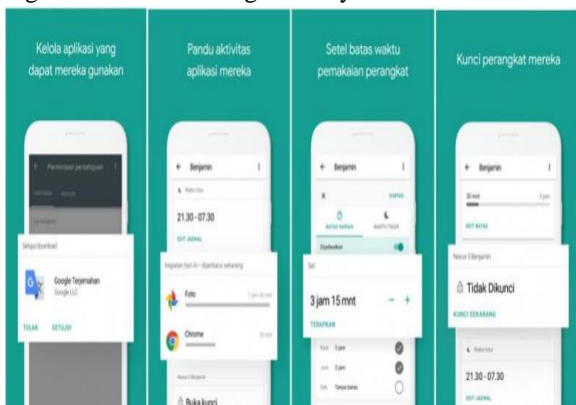


Fig. 3. Features in Google Family

b. Screen Time

The screen time feature on smartphones is useful for controlling the duration of gadget use by users. The additional feature is family care which makes it easy for parents to manage the use of gadgets for their children. Smartphones with Android and IOS systems are also equipped with additional features of this limitation. In addition to maximizing system operations, developers also continue to improve their existence by considering children's development. The following Figure 4 screen time settings on the android system. Meanwhile, Figure 5 shows the feature for viewing the duration of gadget use from IOS.

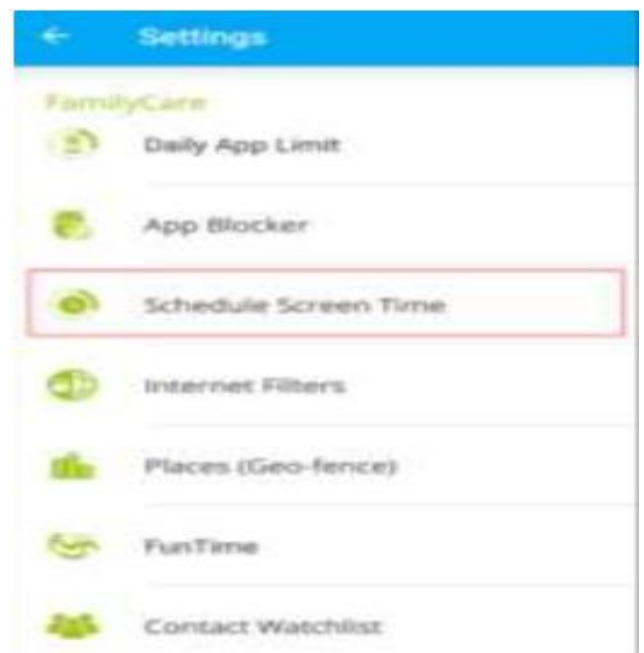


Fig. 4. Features in Android

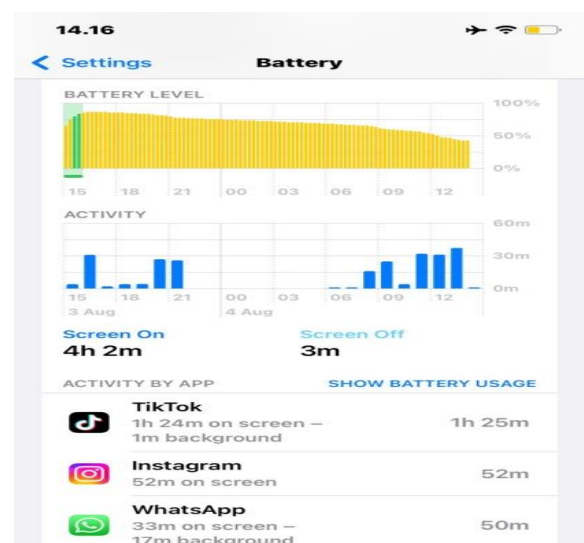


Fig. 5. The feature of viewing the duration of gadget usage from IOS.

Globalization supports the dissemination of information easily and without any boundaries between countries. Dissemination of this information will also have a good impact on the provision of learning to children. The existence of the internet is like two knives that have positive and negative impacts. The problems that usually occur in children related to technology are technology abuse and gadget addiction. Gadget addiction will affect the physical and mental health of a person. Psychologists and practitioners always try to encourage technology developers to continue to limit internet use, especially for children. Therefore, the following applications have integrated features to control children's internet usage so that people old And teachers can control it.[19]

c. YouTube Kids

Youtube kids is a platform for children to explore themselves and their surroundings and develop their abilities. Youtube kids is installed on smartphones for children aged 1-13 years. Even so, parents must also continue to control and control children's access to this application so that children's tasks and rest time are not disturbed. The following Figure 6 shows the appearance of the YouTube Kids platform.[20]

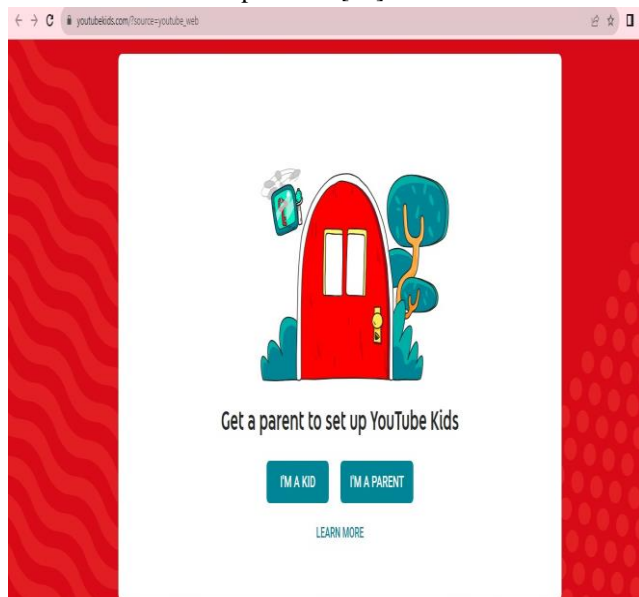


Fig. 6. Display of Youtube Kids

d. Apple Education

Apple Education focuses on utilizing useful technology as a learning medium. Children's addiction to technology can be directed in the world of learning so that the existence of technology will have more positive impacts than negative impacts. Apple education can be accessed via the <https://www.apple.com/id/education/Microsoft Education Center page>. This website can also provide special education for children 12 years old. The following Figure 7 is the display of the Apple Education page.

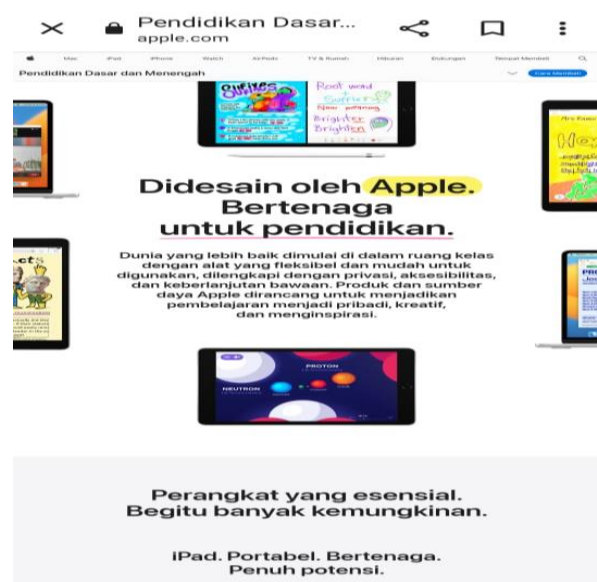


Fig. 7. Display of the Apple Education Page

e. Microsoft Education Center

Companies engaged in technology such as Microsoft have also developed a program called the Microsoft Education Center. The Microsoft Education Center program is engaged in education that can be used by children for learning. This page can be accessed via <https://www.microsoft.com/en-en/education/products/office>. Figure 8 below shows the appearance of the Microsoft Education Center page.

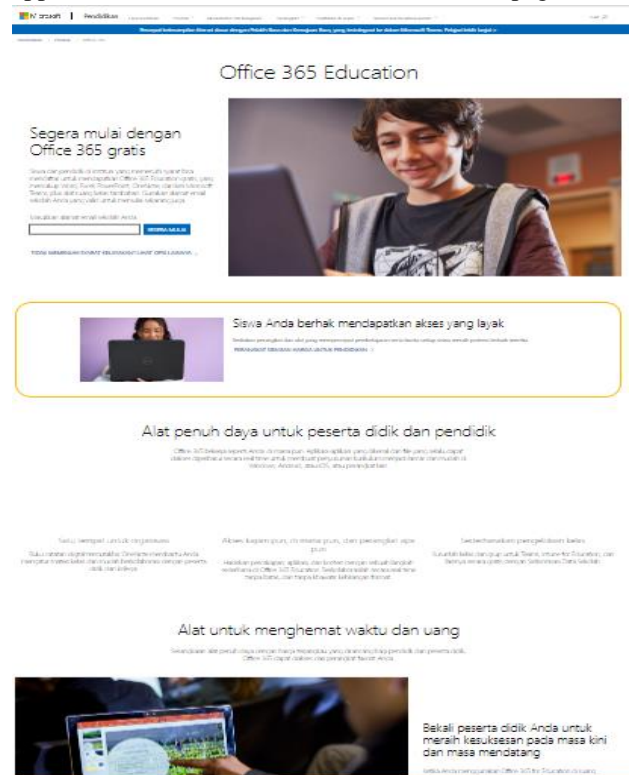


Fig. 8. Display of the Microsoft Education Center Page

f. Google Classroom

Google company also develops programs that can support learning activities. This program can facilitate teachers in creating an easy, efficient and fun learning environment. The google classroom service makes it easy for parents and teachers to monitor children's learning activities. The google classrom service can be used after logging in using email, this program can be accessed worldwide with free internet. Apart from being able to download it on the Play Store, Google Classroom can also be accessed via the https://edu.google.com/intl/ALL_id/workspace-for-education/classroom/ page . Figure 9 below shows the appearance of the Google Scholar page.

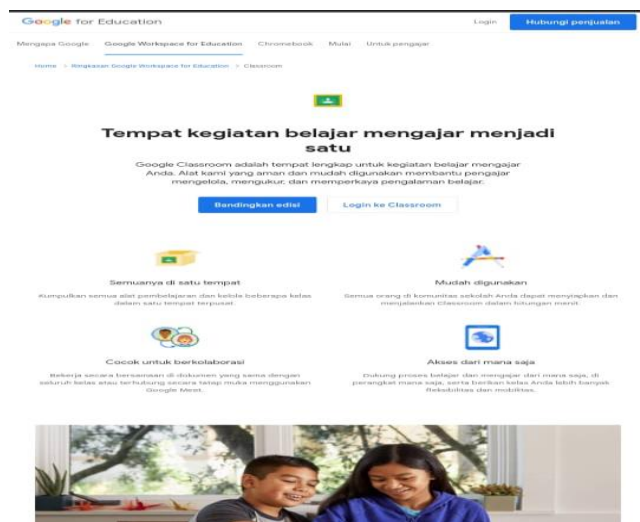


Fig. 9. Display of the Google Classroom Page

4. Conclusion

Artificial Intelligence-based parenting can be applied to elementary school children through monitoring and controlling the use of gadgets. Parents or teachers can easily supervise and control using the Google family application and screen time. An application that is useful for children to explore their abilities is YouTube Kids. Furthermore, educational or learning platforms that can be used such as Apple Education, Microsoft Education Center and Google Classroom. This educational platform makes it easy for teachers to create a more interesting learning atmosphere for children. Children will also be more motivated to learn when the material provided is presented in a shorter, more concise and less complicated way.

Conflict Of Interest

The Author declares that there is no conflict of interest.

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Authors' Contribution

All authors contributed equally to collecting data, acquired the data, drafted the manuscript.

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