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Traditional Games vs. Modern in Increasing Children's Motor Ability in the 21st Century

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***Abstract*—Before the advent of traditional game technology was very popular among the people, along with the times, the emergence of modern games that are closely related to technologies such as gadgets change the type of games among children. This research was conducted to analyze the differences between traditional games and modern games to improve children's motoric skills. The method of this study is a meta-analysis that is a literature study of several relevant theories and research related to the problem. Traditional games and modern games both have their own advantages and disadvantages, apart from that traditional games and modern games are also very effective in stimulating children's motoric development.**

Keywords—traditional games; modern games; child motorization

I. INTRODUCTION

Children love games, many games can improve children's motoric development such as traditional games and modern games, both games have their respective advantages, but both games have their own pros and cons in their applications. Like modern games that make children addicted to their use to cause them to forget time and become lazy to move, this can cause delays in the development of children's motoric skills. One of the traditional games can improve children's gross motoric skills and modern games can improve fine motoric skills.

Before the advent of traditional game technology was very popular among the community, the children used to love traditional games because traditional games only use very simple tools. Along with the times, the emergence of modern games that are closely related to technologies such as gadgets change the type of games among children. Many children live in technology-based communities where exposure to mobile devices is growing throughout the world [1], so that it has a profound effect on gross motoric skills, this is because children are too cool with the games in the gadget application. As a result, traditional games are forgotten and even most children today are not at all familiar with traditional games such as *permainan engklek, gobak sodor, petak umpet, lompat tali* and so on. So that in general children become lazy to move, this can cause delays in the development of children's motoric skills. Internet Gaming Disruption (IGD) involves excessive or uncontrolled preoccupation, insistence or behavior related to computer games and video games that cause interference or difficulties [2]. Even though the development of motoric skills is very important for the life of the child and to be useful in the future such as when he grows up later. There is evidence that the neural mechanism underlying Internet Gaming Disorders (IGD) is like drug addiction. Functional Magnetic Resonance Imaging (FMRI) studies of rest state and gray volume size have shown that playing Internet games is associated with changes in brain regions responsible for attention and control, impulse control, motor function, emotional regulation, sensory motoric coordination [2].

However, in the current era of globalization it is inevitable that the influence of gadgets in the lives of children is very large with a variety of applications including one of which is the game. Exploring general tablet applications or activities used by children aged 0-5 when using their iPad at home and revealing that playing game applications is the most common [3]. Usually every child really likes all types of games on his gadget, both online games and offline games that can make children feel challenged and addicted to the games on their gadgets. *Permainan ludo*, *game lari-lari*, plants vs zombies, *huruf kata*. Games directly impact the lives of players through interactions in their games, and personality plays a substantial role in these interactions [4].

However, apart from that the modern game also has an advantage for children, where with children playing modern games children become faster learning many things, such as recognizing letters, numbers and others. When young people play with applications, literacy skills that arise can be fostered through children's exploration of print (for example, icons, symbols, letters, and words) displayed on the tablet screen" [5], [6]. Basically, video games give players the opportunity to challenge themselves and learn new skills [7]. The use of computers at an early age presents certain physical challenges, given the children's motoric skills are still immature, for example, handling the mouse poses a major physical challenge for them [8]. The iPad is a sophisticated technology tool that can help human problems, but iPad can also be useful to develop children's motoric skills, especially fine motoric skills, by the way children play games in their iPad applications, the games on the iPad application are usually called educational games. Educational games created teach about the development of thinking power and creativity which includes learning about animals, children's songs, cheerful streaks, coloring, and alphabets and supported by an interface that is easy to understand and operate by early childhood 3-6 years [9]. Nearly half of the ages of 0-2 years and two thirds need to further evaluate what effects different literacy applications have on 3-5 years old capable of turning and turning off tablets, swiping, dragging, tapping, opening, literacy skills that appear specifically and exit the application [6]. Application activities involving preschool children will expand current study work. Children drag letters to match words and trace letters with fingers, following the program,

teachers report positive results [6]. "There has been a twofold increase in the presence of computer tablets at the start of classrooms since, while television, computers, and digital cameras still dominate, tablet computers are now accessible to more than 50% of US early childhood educators" [10].

Playing cannot be separated from the lives of children, through playing activities children can explore, discover new things, know the natural surroundings and can experiment, by playing children can get to know the cultures that are around them. "Learning has been a" work "effort, while" playing "is defined as the opposite, as free time, just unstructured and leads to feelings of emotional positive, and not necessarily learning. Learning through play, is not understood as an intentional activity, but also aims, is planned, contributes to the creation of an overall theoretical and methodological orientation in pedagogy, namely the game pedagogy. Thus, playing for learning becomes a legitimate approach to early childhood, appreciating the direct contribution of well-designed learning activities based on play and games for the development of different personality sides [11]. Children learn while playing, therefore in early childhood education the game is a main activity that is used so that children's development can be stimulated and develop well. Therefore, stimulating children's development becomes very important, such as one of the children's motoric development. A systematic review found that outdoor play risks being positively associated with physical activity and social health and is negatively related to sedentary behavior [12]. This means that playing outdoors has quite a lot of benefits for children and can improve both children's physical and social physical abilities, this is the reason why playing outdoors is a very important thing for children. Lucas [13], emphasizes how important the game is in cognitive and motoric development thanks to interactions made by children with objects, and the environment, with others and with themselves. Games are very important resources in the process of teaching or learning children, because conditions that are very necessary such as games in the development of children, it is a key element that will help them if they become adults [14].

The rest of this paper is organized as follow: Section II describes the literature review. Section III describes the material and proposed methodology. Section IV presents the obtained results and following by discussion. Finally, Section V concludes this work.

II. Literature Review

Games are a way for children to learn, where early childhood generally have an activity that is playing while learning, by playing children gain a variety of knowledge that they do not know, so the child will gain life experience. In terms of playing children will be an active person, where children are free to express what they want. "In early childhood education, the game becomes a special instrument in educational interaction, becoming the most effective way of learning for the full development of children. This game can be a link to instill multiculturalism in school [15]. The game becomes a reference for child development, by playing children can grow optimally, through playing children can also interact well in their environment, physical development of children can also grow optimally. Lucas in [13] states in this regard, that sensory-manipulative play has an important influence on children's development, when he says that" they learn the traits that characterize objects and laws that govern them while their creativity is enhanced and a sense of security self-confidence and control over the environment are stated "[15]. The main ingredients in early childhood education are games and toys that can be implicated in learning. Toys become a medium when learning takes place.

Traditional games are a child's play that becomes a culture down hereditary, and has variations in each region, in each region traditional games have only different names for the game, children's traditional games are elements of culture, because they can influence the mental development, nature, and social life of children, Sukirman [16]. become a child tradition child in play, played by children from ancient times to the present.

In addition, traditional games can also train moral values in the lives of children, be honest, be able to work together, practice child patience. Traditional games have many types, one of which is *krlek*. The traditional *krlek* game is a very simple game, and how to play it just throws stones, walks, and jumps. *Engkek* is a game that has existed for generations, this game is done by walking or jumping using one leg of Lindawati [16]. The game crunch is a traditional game that still survives until now and still has many fans, both in the city and in the village. The game crunch is done by walking jumping on one leg [17]. The game crunch is a jumping game on the ground that has a picture of a person or a box. the dominant *krlek* game is more often played by girls, usually played from two to five children. However, before we start this game, we must draw boxes on cement, asphalt or soil, draw 5 rectangles in vertical attachment and then on the right and left are given a rectangle again [18]. Apart from that traditional games have many benefits for children, one of them is that it can improve children's gross motoric skills, exercise physical balance of children. The game has the benefits of *krlek*, the benefits of the game include: giving joy to children, healthy physical children because this game is played with a lot of moves, namely jumping, exercise balance and strength of the child's body (gross motor) because this game is played by jumping with one foot, teaches discipline to obey the rules of the game, develops the ability to socialize children because *krlek* is played together, develops children's logical intelligence, which trains children to count and determines the steps that must be passed [17].

Modern games are a game that is played by using sophisticated technological tools that are developing among the people today which is done by more than two or four people but can be played alone. "Literature on early childhood education and Information and Communication Technology (ICT) has emphasized that computer use can be a valuable learning experience when it is used in a pedagogically appropriate way and integrated into a natural learning environment, while teachers can play an important role in supporting and expanding the experience of children with computers "[19]. As time went by, the era was growing so that the motoric growth of children also had a big influence in children. In the 21st century, technology has become familiar to the lives of children. Today, young people are surrounded by technology and use it in their daily lives, [20]. Even technology is a common thing in the lives of children who come from disadvantaged families. Thus, more and more children under the age of eight, even from low-income families, now have access to cellular technologies such as

smartphones and tablets [17]. The process of teaching and learning children can be improved on gadgets, such as children can learn through playing gadgets. Children's motoric skills can also be improved through playing on gadget applications. Many preschoolers have not developed enough fine motoric skills needed to handle conventional computer peripherals such as mice and keyboard, tablet is an interesting tool to carry out educational activities for this age group [17].

International research shows that preschoolers can handle applications for such devices relatively easily [17]. Given the shifting view of general technology use in early childhood, tablet computers have been described as very suitable for early childhood [17]. As such, there has been an explosive increase in the number of self-proclaimed educational applications available for free or at a cost in two popular online stores (Google Play and the App Store) and is aimed primarily at the under-10 age group. Educational applications are defined where children are "cognitively active and involved, when learning experiences are meaningful and socially interactive, and when learning is guided by specific goals". Most applications for preschoolers advertised as education have very little educational value [17].

Early childhood is a child who is at a critical time in developing motoric skills, and motoric skills are usually called basic movement skills. Skills in early childhood generally refer to locomotor and object control skills. This skill allows in games and sports in childhood [21]. Motoric skills can be improved by physical training of children. "SPARK believes every preschool environment must provide children with both structured and unstructured physical activity (PA) time so that each child accumulates at least 60 minutes of active daily. The SPARK session is a structured PA example because time is scheduled, lessons have specific learning objectives, and the teacher has pre-selected content and instructional strategies. Unstructured PA can be planned (for example, activity break schedule) but children usually have more choices about what to do, and who and what to play. Unstructured PA encourages individual creativity, allows exploration, and allows children's time to show that they can play safely and work together with others in a social environment [22].

A positive relationship, although weak has been shown between the ability of motoric skills in early childhood and physical level improvement. Low socioeconomic status has been associated with inadequate, smooth and rough motoric skills [23]. Motoric skills have a specific purpose in learning at school. The goal of motor learning is the emergence of one product and the results of motion learning, namely mastery of skills [23]. Child's motoric development will be seen when the child performs various activities such as prancing, jumping, running or just walking around which in practice requires coordination between body members [24]. Motoric development strategies include three areas, gross motoric skills, development of appreciation and body awareness and fine motoric skills [25]. Despite the presence of motorized milestones, when studying a child's motoric development, it is necessary to verify the cultural context and not just follow the western reference standard [26]. Professionals or researchers must also pay attention to the type of measuring instrument used for the evaluation of children or parents or both. Every culture has its own organization, language, and living habits. Therefore, not all instruments are easily applied in all countries [25]. Considering environmental characteristics in development, nutrition is also an important factor for healthy growth and development in childhood [27].

The term "motorbike" implies cognition, remembering that doing the physical movements necessary for learning requires planning and consideration [28]. Both fine and coarse motoric skills facilitate the school function, with fine and visuomotor skills used in preacademic class assignments such as crayons and pencil-grasping, paper and materials, and symbol recognition [29]. Aspects of visuomotor integration of fine motor skills involve coordination of visual perception with motoric movements and have been positively associated with literacy and mathematical results in many samples [29]. And gross motoric skills help children to truly navigate classrooms, including body maneuvers and their learning materials, and to participate in outdoor and play activities. Rough motoric skills are involved in social and behavioral outcomes, partly through children's self-confidence [30]. Since the mid-2000s, the possibility of the importance of motoric skills in reading results has resurfaced because large-scale analysis of multiple datasets inside and outside the US shows a strong connection between fine motoric and composite reading steps which includes decoding and vocabulary [15] Based on research that supports the experimental and probabilistic nature of EF and motoric skills, they can be a target of useful interventions especially in the early years [16].

III. MATERIAL & METHODOLOGY

This section presents the material used and the proposed methodology.

A. Data This

Type of research is a literature study, where the process is looking for problems found in the relevant reference theory. This literature study is used as a theoretical reference obtained in several studies that have become the main foundation in research practice.

B. Method

Data collection techniques in the form of documentation such as journals, articles, electronic media, namely the internet related to existing problems. And in the form of literature studies using sources related to problems in the study.

C. Data Analysis

After the data is obtained, the data is analyzed into a descriptive method by means of describing all the data found, then analyzed to provide the best explanation possible.

IV. RESULTS AND DISCUSSION

This section presents the results obtained and following by discussion.

A. Result

One of the things that becomes human welfare is the emergence of technology, technology can be useful in any case, including in terms of training children's motoric skills, in a way that children can play modern games that use sophisticated technological tools, the ease of playing technology when played by children because this technology game can be played by two or four people, it can even be played alone without having to have friends. Which causes modern games to be attractive among the community because

modern games can be played online or offline. Especially if the child is already familiar with the internet, like the online game, this will be very dangerous for children, children can download any application in the gadget, because the child is a person who has a very high sense of curiosity, usually the child will explore exploring what is in the gadget so most likely if children play gadgets without adult supervision it will have a very bad impact on children. Therefore, it is very important for parents to give gadget playing opportunities to children but remain under supervision and time constrained by parents. Because in the games that exist in gadget applications there are not only children's games but adult games also exist, such as playing games that have bad elements in children. Apart from that modern games, especially games that are played online also make children feel challenged in playing them, in addition to feeling challenged, children will also feel addicted in playing it because modern games can make children feel as if they live in the game, and children will feel heavy dependence on the gadget, if the child is already very dependent on the gadget, it will be difficult to make the child forget the gadget. And the frequent playing of gadgets can adversely affect children's eye health as well.

In ancient times before the 21st century, modern games were very rarely played by children, especially among children who were in the countryside, but as the times of technology developed, and the economies of the villages were also developing, so the technology begin to be known by the village community, but not only adults, children are also very affected by the world of technology, the nature of the child's desire to know everything that happens in this environment makes children very easy to know technology, especially in technologies such as gadgets that have interesting games child's attention. But behind all this there are advantages and disadvantages when children play this modern game. The advantage is that it can train its fine motoric skills by dragging its finger on the gadget screen while playing, but the disadvantage is that the child will feel addicted and the child becomes a less social person, because online and offline games on the gadget can be played by children alone, apart from that by playing the game on the gadget the child becomes lazy to move, so that only the fine motoric is developing, but the gross motoric will be hampered. But, training the child's fine motility abilities does not have to be online or offline games, children can play games that have many benefits for themselves such as playing traditional games, traditional games are very well played by children, because in addition to developing motoric skills, traditional games also have very high cultural values.

Stimulating a child's motoric development can be done with a traditional game, by playing traditional games can be a means of children's educational games. Traditional games have many types, one of which is krlek. The body is one type of traditional game that can develop children's motoric skills, both gross motoric and fine motoric. The game is also a game that is very simple and easy to play for children, apart from that traditional games of *krlek* have many benefits for children such as improving children's motoric skills, increasing children's balance, practicing patience and discipline of children, and so on. Agree with Apriani [17] The benefits gained from this game are: the child's physical abilities become strong because in this game, the child is required to jump up and down, hone social skills with others and teach togetherness, can obey the rules of the game mutually agreed upon, developing children's logical intelligence, playing games to train children to count and determine the steps that must be passed, children become more creative. Traditional games are usually made directly by the players, they use items, objects, or plants that are around the players, it encourages them to be more creative in creating game tools, training balance, this traditional game uses one leg to jump from one box to the next, practice the motoric skills of the child's hand because in this game the child must throw *gacuk* / *kreweng*.

V. CONCLUSION

This research has analyzed the differences between traditional games and modern games to improve children's motoric skills. It is shown that both traditional games and modern games have their own advantages and disadvantages, apart from that traditional games and modern games are also very effective in stimulating children's motoric development.

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