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# The Influence of Socio Economic Parent on Using Digital Media in Early Childhood

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**Abstract.** Technological advancements entering the industrial era 4.0 bring changes to all aspects of human life including children especially in their use of social digital media. This study aims to examine the effect of parents' education level and economic level on their children's use of digital media in early childhood. In this quantitative research, an online questionnaire bundle Surveillance of Digital Media habits in Early Childhood Questionnaire (SMALLQ) was employed to measure the digital literacy of parents with younger children. This study involved 100 parents with an average age of 33.04 years, height 157.02 cm, and weight 56.41 kg. Their children consisted of 63 boys and 37 girls with an average age of 4.65 years, height 101.90 cm, and weight 17.06 kg. The results showed that the average use of digital media was still high, exceeding the guidelines of the WHO which recommends the use of digital media only one hour per day. This study also showed that the level of parents' education had an effect on the use of gadgets, while the economic level of the parents had no effect on the usage of gadgets on the children. These results suggest that technology literacy is needed by parents in order to be able to regulate their children use of digital media.

**Keywords:** parents · parent-child relationship · use of gadget · parents' educational level · parents economic level

## 1 Introduction

Technological advancements entering the industrial era 4.0 bring changes to all aspects of human life. Such changes have brought an impact on social life, culture, economy, education, and even the political world. People's lives are shaped by technology in a variety of ways. A lot of dynamic changes are occurring as a result of the widespread use of modern technology in business, government, and other areas of life (Kayembe and Nel 2019). Therefore, technology has changed the human lifestyle. For example in education sector, many teachers in schools, colleges, and universities are already incorporating technological advancements into their pedagogical approaches, teaching

methods, and applying some application (Bal and Gupta 2020). Especially on education paradigm in higher education began to change from a teaching university to a research.

Higher learning institutions must continue to integrate an innovative technique to strengthen the teaching and learning process to meet the needs of the industrial revolution 4.0 (IR4.0) in education (Halili 2019). In addition to that, research output not only on the orientation of goods but also on publications in, for example, international high ranking research journals. Likewise, the university ranking system makes using the internet one of the defining indicators. Another example, the lecturing process includes searching for lecture materials, working on college assignments and building and communicating social networks, so the internet usage is important in educational settings.

The development of digital media in this industrial era 4.0 has also penetrated the joints of family life, changing the direction of communication in the family. In fact, there are families who physically get together, but emotionally each family member has their own busy life with their own smartphones. For example, there is a husband who is happy with his business forum while at the same time, his wife is busy with the world of socialites and too busy taking photos to update family activities that look sweet. Some view it can be seen from teenage children on that family are busy with their cyber friends. This shows that physical existence in togetherness does not involve emotions, affection, and healthy communication in the family. In public discourse, all new technologies elicit some level of anxiety. The negative impacts of digital media on youth are frequently mentioned in headlines (Twenge 2017).

Furthermore, many pre-schoolers extremely use gadgets, and the number of children wearing glasses has increased dramatically due to excessive use of gadgets (Makassar Tribun News December, 2018; Belitung Tribun News December, 2018; Tempo October, 2014). The rapid growth of technology has disrupted various aspects of human life, including in the care of children. Alghamdi (2016) found that even though technology has benefits in increasing knowledge and facilitating access to educational and learning resources, technology has disadvantages including influencing personal life, relationships with others, and early childhood health. The results The concept of child-care by parents who must activate hands-on is greatly erode by the increasing frequency of children using digital media. Some research show that young people in developed Asian economies use digital media to a significant extent in daily life because of the ubiquity of mobile technologies (the Asian parent Insight, 2014). Digital media use in early childhood can be a force for good or bad (American Academy of Paediatrics 2016). One of them is parenting in physical-motor skills. This ability is very important to be optimally stimulated through various beneficial physical activities. In children, physical-motor skills need to develop continuously, through both early childhood education and family. People's knowledge of optimal child development tasks needs to support children's motor development. The use of digital media in children will directly reduce the time for physical activity and socialization with friends. This is because digital media tends to make children lazy to move and happy to be alone. Parents can affect their children's media use through modeling behaviour, digital parenting style, early media attitudes and beliefs, and educational level. Future research should examine whether digital parenting styles explain kid media use above and beyond other parental factors, as well as explore potential mediating and regulating mechanisms. As children begin to use media at an

earlier age and for longer periods of time as they grow older, it is expected that media use among children will increase in the future years. Adults are attached to their mobile devices, and this attachment is not only visible but may be more strong in youngsters, which could lead to negative consequences (Konok et al. 2020).

Special Region of Yogyakarta (popularly known as DIY) is one of the provinces that has a total of 5,439 educational institutions, consisting of 2,122 kindergartens, 79 special schools (SLB), 2,029 elementary schools, 550 junior high schools, 217 high schools, and 84 universities (Bappeda 2020).

With a large number of educational institutions, DIY Province has declared that 2025 DIY will become a reference for Association of South East Asian Nations (ASEAN) level education. With a large number of educational institutions and superior education quality at the national level, DIY has the second highest quality Human Development Index (HDI) after DKI Jakarta. The biggest contributor is the average length of schooling in DIY, which is 25 years old and over, increasing from 14.15 years in 2010 to 15.56 in 2018. Due to the strong world of education in DIY, researchers are interested in examining how education and economic levels affect the use of gadgets in children.

## 2 Method

This research is a quantitative descriptive study with a survey method. This research starts from the translation research instrument (SMALLQ) to data analysis. The stages of this research can be seen in the research flow chart in Fig. 1.

The instrument used in data collection was an online questionnaire bundle Surveillance of Digital Media hAbits in EarLy ChiLdhood Questionnaire (SMALLQ™). This questionnaire included three sections (I) Digital-media use; (II) Non-digital behavior, play, sleep and eyesight; and (III) Particulars of parents and child is the tool for data acquisition. SMALLQ™ is trademarked in 2018 under Class 41 TM120494 c/o Professor Michael Chia, National Institute of Education, Nanyang Technological University, Singapore. This instrument is translated into Indonesian and adapted to the Indonesian context.

This study involved 100 parents with an average age of 33.04 years, height 157.02 cm, and weight 56.41 kg. Their children consisted of 63 boys and 37 girls with an

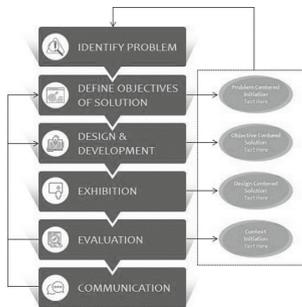


Fig. 1. The Research Flow Chart.

average age of 4.65 years, height 101.90 cm, and weight 17.06 kg. Data were analyzed using SPSS 23 statistical software, data analysis was carried out descriptively with the percentage and correlation of bivariate and multivariate as well as regression analysis. Description analysis is carried out to provide an overview of the initial conditions of the respondents.

### 3 Results

Figure 2 shows that 54% of parents who filled out the questionnaire are university graduates while 46% of them have non-university education.

Figure 3 illustrates that while 59% of parents have very low incomes, 9% of parents have low incomes. Moreover, 5% of parents have moderate income whereas 3% of parents with high incomes. 1% of parents also have very high incomes.

Figure 4 shows that while children’s average use of digital media during the effective working days is 2.02 h, it is 2.07 on the weekends. Thus, the use of digital media between weekdays and weekends is not significantly different, only 0.05 min apart.

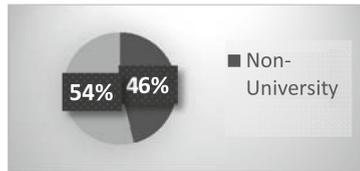


Fig. 2. Parent’s Educational Background

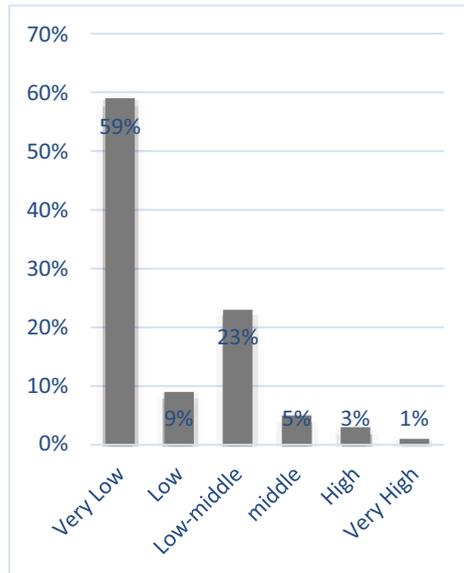


Fig. 3. Parent’s Economic Status

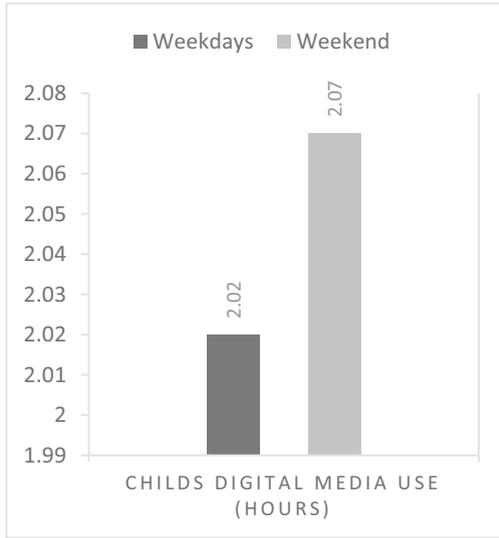


Fig. 4. Mean of Child's Digital Media Use in the weekday and weekend

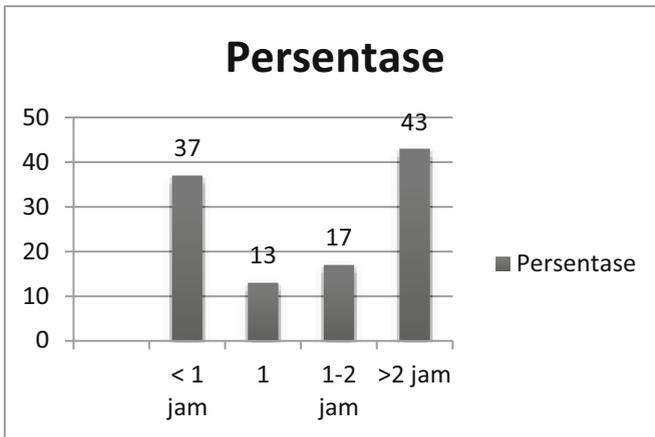


Fig. 5. Children's Use of Digital Media

Figure 5 shows that 37% of children use digital media for less than 1 h per day whilst 13% of children use digital media 1 h per day. Moreover, while 17% of children use digital media between 1–2 h, 43% of children use digital media more than 2 h.

Table 1 shows that education and the economy together affect the use of digital media in children.

From Table 1, the results of the Coefficient of Determination or R square based on the output table are 0.271 which comes from squaring the value of the correlation coefficient or R, namely  $(R^2)$  which is  $0.271 = 0.073$ .

**Table 1.** Model fits summary and regression

Dependent Variable	Predictors	R	R Square	F	Sig
Child’s digital media use	Parent’s Educational Background	0.271	0.073	3.829	0.025
	Parent’s Economic Status				

## 4 Discussion

The findings of other research support the idea that parenting style is a significant investment in a child’s development. Parental investments in commodities and time do not adequately convey the wide variety of parent-youth interactions we consider. Instead, two parenting style indices that might be characterized as courteous and watchful parenting encompass numerous interactions. The key parenting constructs in the large literature in developmental psychology are aligned with these indices. Even after controlling for a variety of variables and the possible effects of unobserved factors, socioeconomic disadvantage is connected with the level of parental surveillance. This is in line with the theory that parenting style is hampered by a lack of attention and cognitive bandwidth due to disadvantage. Finally, respectful parenting is essential (Cobb-Clark et al. 2019).

The results of existing research indicate that education and the economy together have an effect on children’s media use. Research results parents of higher SES or education are more digitally advantaged. Parents with a higher level of education use a wider range of devices to go online, especially more smart devices (Zhang and Livingstone 2019). Twenty-four percent of parents with a postgraduate degree have used wearable devices during the past month, compared to 11% of those with a college or university degree and 6% of those with a secondary school education. This explains that parents who have a higher level of education are more literate in the use of the internet and its use in daily life.

Besides being known as an education city, DIY Province is a province that has a low cost of living and a low regional minimum wage compared to other provinces. According to Government Regulation (PP) No. 78 concerning Wages in 2015, low regional minimum wage aims to provide comprehensive justice for workers to get a decent life. Low regional minimum wage of DIY Province in 2020 is Rp. 1,704,608 which is lower than other provinces. Heinz (2016) reported that students who have low socioeconomic backgrounds have more time and opportunities to access digital media without supervision compared to those having first-class economic backgrounds.

Early childhood is a golden age period when various uses of gadgets in child care should be considered for creating a close relationship between parents and children because families have a strong bond of loyalty and experience history and a shared future. Family members (e.g., parents and children) concentrate on their various relationships and communication with each other. This parent-child communication is the main vehicle in building intimacy among them (Caughlin et al. 2011).

The children's use of digital media was an average of 2.05 h per day in the effective working time and 2.07 h during the weekend. These average hours longer than the recommendation of WHO which is one hour only. WHO guidelines advice that children should use digital media only 1 h per day, do 60–180 min of physical activity per day, and get enough sleep 10–13 h per day. The data of this research revealed that only 13 percent of children use social media one hour per day. Children require supervision to learn the relationship between visuals and real objects because media content is a symbolic representation of information that exists in the real world. Under responsive and supportive conditions, children quickly master these skills, which may be critical for school preparedness and academic progress. Because media is so prevalent, it should no longer be regarded as a bothersome variable that could stymie growth; rather, it should be regarded as an integral element of the development context. The key for children to be able to do more physical activity is to use role models or parents to set a good example by reducing the use of digital media.

## 5 Conclusion

Education and income together have an effect on children's use of digital media. The results showed that the average use of digital media was still high, exceeding the guidelines of the WHO which recommends the use of digital media only one hour per day. Using the digital media longer than one hour will adversely affect children's physical activity which is a basic need in their growth and development. This is where the role of parents in parenting provides a good example for children, because the family has 3 key roles, namely children learn about family structure, children recognize task orientation and transactional processes.

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