

Development of Digital Literation Model to Improve Health Food Knowledge of Early Children Indonesia

Siti Aisyah^{1*}, Anita Chandra Dewi², Dian Novita³

^{1,3}Universitas Terbuka, Faculty of Teacher Training and Education, Banten, Indonesia

² Universitas PGRI, Faculty of Education, West Java, Indonesia

*Corresponding author. Email: sitia@ecampus.ut.ac.id

ABSTRACT

This study aims to describe and examine more deeply about digital literacy to increase knowledge of healthy food for early childhood in Pamulang District, South Tangerang and North Semarang District. This research is a development research conducted in 3 stages. The first year is the development of the instrument up to the prototype model at the Kindergarten, Pamulang District and North Semarang District. Meanwhile, the second year is the development of digital guides and tools, and in the third year the trial of the model is limited and widespread. In this study, a digital literacy model is being developed to increase knowledge of healthy food for early childhood. The use of attractive visual media in learning models by utilizing information technology in the form of distance learning applications such as Zoom can increase children's curiosity and interest, even though they are studying from home due to the pandemic period. In addition, it can generate motivation and stimulation in the learning process and can affect the child's psychology. In addition, visual media that is packaged in the form of illustrations and animated videos can help children improve understanding, make interesting material presentations, make it easier to interpret data, and condense information. Thus, researchers suspect that the motivation and interest that are generated by the presence of interesting animated images and illustrations will affect the ability of children to understand healthy food. This development research will then be continued by carrying out the next stage, namely a limited and extensive model trial for digital devices and guidelines for their use.

Keywords: *Digital Literacy, Healthy Food, Early Children.*

1. INTRODUCTION

Early childhood is a very important and very basic early period throughout the development and development of human life. AUD is an investment in human resources (HR) that requires special attention in every growth and development. In addition to stimulating children at the stage of child development, it needs to be supported by nutritional intakes in the healthy food that will be served. For that, pay attention to providing healthy food to children. So that it will produce healthy children, be it physically, mentally and socially.

Healthy food is food that contains useful substances needed by the body and must have hygienic, adequate and balanced requirements. Healthy food doesn't have to be expensive.

In the daily life of the children, they often encounter various snacks that they encounter, which can be when the child is at home or when the child is at the study area. Traditional snacks produced in the form of a cottage industry are usually still in doubt about their safety. Even though it is produced using high technology, it still does not guarantee its quality. Therefore, the safety of street food is a health problem

in society that requires special attention, consistency and collective response [1]

In general, the street food sold by street vendors is of very poor quality from a health aspect. Based on the results of a survey by the Food and Drug Supervisory Agency (BPOM) in the last five years (2006-2010), it shows that as many as 40-44% of children's snacks do not meet food safety requirements. in Semarang it is not suitable for consumption. Besides containing artificial preservatives, there are artificial colouring ingredients that can harm the human body.

2. CONCEPTUAL FRAMEWORK

The types of food in "Age Now" are much influenced by children's literacy skills, because it is very easy to buy snacks anywhere, anytime, and anywhere. The children just need to order food using a smartphone, within a few minutes the ordered food arrives. Ease of obtaining the snack food needed has a positive impact and a negative impact. Parents should always take care that their children can always consume healthy food and control children's snacks.

Freedom of information and media technology, mass media growth has increased significantly. So much information is easily available with the rapidly developing media technology. Communication media has undergone a metamorphosis into digital media with various developments. This attracts everyone to have it, moreover what they need now is easier to get by only using existing communication tools such as smartphones, laptops and so on.

Based on research conducted by Siti Aisyah et al., 2019, it was found that lifestyle had a significant effect on the selection of children's snacks. This can be seen in the tendency of parents to maintain family health, such as bringing their own food when traveling, providing meaningful activities for their children.

Digital literacy also has a significant effect on the selection of children's snacks. We can see this when ordering food online, parents tend to pay attention to the nutritional content of the food they will order, and buy food according to the wishes of their children, so that it does not affect household finances.

Digital literacy has a significant effect on the choice of children's snacks together. With the advancement of technology and children's ability to use gadgets, parents can discuss the food they will order with their children, and parents will innovate in family meal planning.

Based on the results of research and interviews in the selection of snacks carried out by researchers in 2019 in North Semarang and Sawangan, it was found that data that parents who bought food more than 3 times a week were 9%, 6% of parents made arrangements for snacks to be given to children, as many as 6% of parents pay attention to the nutritional balance of the food they will provide to their children,

Based on this data, it can be concluded that the role of parents in providing healthy food with balanced nutrition still needs to be improved. This awareness raising can be done using digital means, as can children.

The reality in the field, especially in several big cities such as Jakarta and Semarang, is found that many children eat street food easily by using smartphones, especially in the digital era like today. Ease in accessing these foods makes it difficult for children to choose healthy or unhealthy foods, this can affect children's perceptions of healthy food. The purpose of this study is to describe and examine more deeply about digital literacy to increase knowledge of healthy food for early childhood in Pamulang, South Tangerang and North Semarang districts.

3. METHODOLOGY

In accordance with the type of research, in the development of learning, a model is needed to be used as a reference. The model used as a reference in this development research is the Dick and Carey model [2] The choice of this model is based on the consideration that this model in detail guides the development of digital literacy, starting from needs analysis to evaluation.

The relationship of all stages (first and second year) in the Dick and Carey Model can be seen

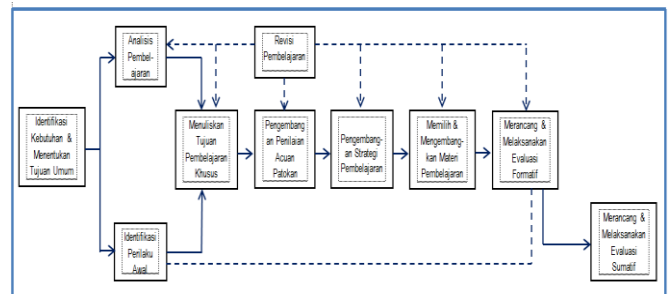


Figure 01. Dick and Carey Model (Dick & Carey in Reiser & Dampsey, 2007: 13)

To carry out the development of a digital literacy model with an R&D approach, the researchers have summarized the research instruments table and data analysis

4. RESEARCH RESULTS AND DISCUSSION

Digital literacy model was carried out in increasing knowledge of healthy food for early child hood, a survey of teachers about health food was carried out by involving 331 teachers and parents who live in South Tangerang, Bogor and Semarang. The survey results are very important to deepen respondents' knowledge about health food and how respondents think about learning models that can be used for early childhood so that knowledge about healthy food can be digested properly and can be implemented in daily life.

Following are the results of the survey.

1. Profile of Respondents :

Based on the results of a survey of 331 respondents, it is known that most of the respondents are women. Based on the General Description of the State of Early Childhood Education (PAUD) issued by the Ministry of Education and Culture, the Secretariat General of the Center for Data and Statistics for Education and Culture, Jakarta, 2020, it was obtained that the total number of formal PAUD teachers was 356,779, female teachers totaled 343,409 (96.3%) and 13,370 male teachers (3.7%). Meanwhile, the data obtained were 309,899 non-formal PAUD teachers, 286,415 female teachers / educators (92.4%) and 23,484 male teachers (7.6%). Like primary and secondary school teachers, PAUD teachers are also a profession whose existence is legally recognized. Permendikbud Number 137 [3] article 24 paragraph 1 states "Early childhood educators are professionals who are in charge of planning, implementing learning, and evaluating results.

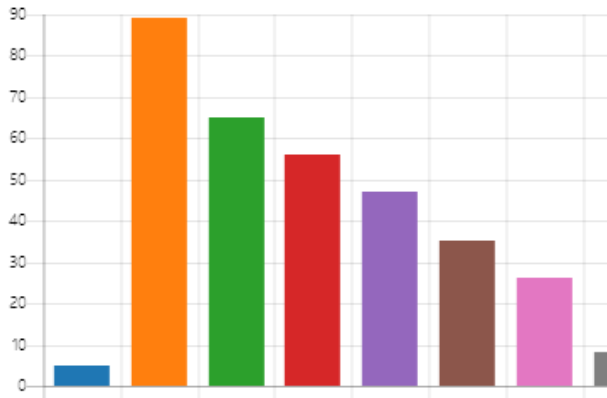
Pedagogic competence is the ability to manage aspects of early childhood development which includes understanding the characteristics, aspects of development, needs, talents and interests of early childhood, designing and implementing stimulation activities, using appropriate stimulation media technology, and designing and carrying out development assessments. children accurately and comprehensively. Personality competence is a personality ability that is stable, stable, mature, wise,

wise, dignified, has a work ethic, responsibility. Based on this description, it can be concluded that PAUD teachers are a legitimate profession and a profession that demands competence. A legitimate profession means that the existence of PAUD teachers has a juridical basis as a legal reference in carrying out that profession. A profession that demands competence means that in order to become a PAUD teacher, people must first equip themselves with a number of competencies that are very much needed in carrying out the profession. This means that only people who have the competency of early childhood teachers are eligible to carry out the PAUD teaching profession. This conclusion confirms that there is no gender requirement to become a PAUD teacher. Both men and women have the opportunity to become PAUD teachers. The only requirement is to have PAUD teacher competence. Thus, the society's assumption that PAUD teachers are a domestic profession because it is closely related to the work of guiding and caring for children as is done by mothers or domestic helpers is an unreasonable assumption.

To overcome stereotypes of gender roles in the ECCE teacher profession, the roles of family, school and community institutions need to be increased. The family as the main foundation for shaping the character of a child's life should avoid gender-biased advice and parenting. The role of all school institutions including PAUD institutions in building gender equality in the PAUD teaching profession is seen in the form of teacher-student interactions that are free from gender bias. Gender-friendly teacher-student communication can be the key to realizing gender equality in the ECCE teaching profession.

The role of community institutions is to provide enlightenment for society about gender equality in any profession so that people realize that gender injustice is not a given fact but a social construction that gives a superior role to certain genders and subordinates other genders.

2. Age of Respondents



Based on the survey results, it is known that the age of respondents is mostly in the age range of 20-50 years, while based on data from the Ministry of Education and Culture, the Secretariat General of the Center for Data and Statistics Education and Culture Jakarta, 2020 the number of formal PAUD teachers is 356,779 aged <= 19 2,091 (0.6%), aged 20-29 as many as 70,895 (19.9%), aged 30-39 as much as 124,501 (34.9%), aged 40-49 as many as 97,072 (27.2%) and aged 50 -59 as much as 59,076 (16.6%).. This is in line with the data released by the Dekdikbud that formal PAUD teachers range in age from 20 to 50 years or as much as 82%. This data shows that in terms of age PAUD teachers are at the productive stage and young age so that the ability to adapt to changes and advances in information technology is expected to be carried out well.

3. Last education level

The main responsibility of teachers is not only teaching but also educating, because in fact a very complex activity is not only related to science, technology, art but also to other values. Especially with the implementation of the 2013 Curriculum, which requires teachers to be professional so that the assignments carried out can be meaningful for students. Therefore, it is clear that in order.

Early childhood education is of higher quality, so it must be handled by professional educators. The duties and work of guiding early childhood professionals cannot be done by just anyone, but must be done by professional educators as well. The results of preliminary observations made by researchers indicate that the quality of PAUD teachers is still very low, it can be seen from the academic qualifications and competences possessed by PAUD teachers, especially in

rural areas. This is caused by the following factors. 1) there is a view of some people that anyone can become a PAUD teacher as long as he / she is knowledgeable; 2) a shortage of PAUD teachers in remote areas, giving an opportunity to appoint someone who does not have the skills to become a PAUD teacher; 3) many PAUD teachers do not appreciate their profession.

4. Status Responden

Most of the respondents are UT students (98%), illustrating that it is hoped that UT students who are already PAUD teachers will have the ability and willingness to deliver material online based on information technology. Because UT students, especially the PGPAUD Study Program, have equipped their students to improve their abilities in the field of Information Technology. In the PGPAUG curriculum, there are PAUD4408 Computer courses in AUD Development Activities that equip PAUD Undergraduate students with the ability to organize introduction to computer technology in early childhood.

5. I prefer to use printed books rather than digital media



Respondents gave their responses about which one was preferred, whether printed books or digital media, the results of respondents showed that as many as 16.4% stated that printed materials were more practical than digital media. Another opinion explains that 9.96% stated that digital media is difficult to access. For the statement that printed books read more comfortably was stated by 45.34%. Meanwhile, digital media statement can provide clearer information by 34.4%. This data shows that printed books are felt to be more comfortable reading them, an interesting statement is that the existence of printed books in delivering information is still popular, it is hoped that printed books will still display interesting pictures or illustrations, so that knowledge about healthy food is of course with colorful pictures colors will still provide the necessary comfort and information. Another role of respondents is that

34.4% stated that because it is digital, the information conveyed is clearer with colors and illustrations. This information is an indicator that even information about healthy food must be with an attractive illustration, especially accompanied by animated illustrations that are very popular with early childhood.

6. Digital media helps me understand information.

From a total score of 5, the average is 4.2, illustrating that the responses mostly state that digital media helps in understanding information. By definition, digital media is a content format that can be accessed by digital devices. This digital media can be in the form of websites, social media, digital images and videos, digital audio and others. Based on March 2020 data from eMarketer, digital advertising spending in 2019 reached 43.5% of total spending. But this digital advertising spending will beat traditional media in 2021, namely by 52.1%. With the increasing desire of the public with various applications that will make communication and lifestyle easier, it is only fitting that information about healthy food must be able to use digital so that its use is more massive and further increases understanding of the information conveyed.

7. The benefits of digital media can help me to understand new things related to healthy eating for AUD

The survey results show that the average answer is 4.36 out of a maximum score of 5 states that digital media can help to understand new things related to healthy food for AUD. Sharing pictures provides value for communication activities about healthy food by providing pictures or illustrations of healthy foods that the teacher can easily place and convey in the chasing process. Online or face-to-face learning. As content creation continues to increase on social media channels and on the internet as a whole, the need for fresh graphics and engaging content also increases. The widespread use of cell phones with cameras makes it easier to take photos or create animations. This can spur teachers to create creative content so that students will understand it very easily. Content can take many forms, including text, numeric files, graphics, audio, and video. However, the content must always be provided with an explanation by the teachers and should not be released without any explanation or other supporting learning activities.

8. Through digital media, I can exchange ideas with friends about healthy food for early childhood

Learning the introduction of healthy food in schools plays an important role in the knowledge and influence of the daily life patterns of early childhood. Through the introduction of nutritious food, students can get used to consuming nutritious food every day. Learning the introduction of healthy food in children is carried out based on the RPPH plan made by the teacher. Introducing healthy food, teachers tend to use image media that are less attractive to children. In this study, healthy food is served using power point media equipped with attractive animations so that children are happy and it is hoped that their learning outcomes can be achieved optimally.

At the time of compiling the RPPH, the teachers could easily share pictures and information about healthy food, which could then be realized in the form of a PPT which is full of attractive illustrations and colors.

9. Information about healthy food circulating on social media provides sufficient information about healthy food.

The answers from respondents who stated an average of 4.11 from a maximum score of 5, showed that most respondents agreed that information circulating on social media about health food was sufficient to provide information about healthy food. However, in this study, the teachers were provided with animated power point on healthy food. This information is very necessary for teachers to get correct and comprehensive information about healthy food.

10. Digital media helps me in reading pictures related to healthy food

The average answer from respondents is 4.35, indicating that most respondents agree that digital media helps in reading images related to healthy food. Learning media has a very important position in the communication process when teaching because it has links with other components that also have a significant share. large in order to achieve learning objectives, this is because in a teaching and learning process there are two elements that are interrelated with one another, namely learning media and teaching methods.

11. Early childhood understanding of healthy food can be improved by using digital literacy media.

Respondents on average stated a score of 4.2 regarding early childhood understanding of healthy food can be improved by using digital literacy media. This result is possible because the performance of the material with digital literacy media will attract children's attention, especially with moving images and funny animations, so that children feel happy. Viewed from the cognitive aspect, the presence of images on the reading can make it easier for individuals to recall information. In a study it was found that children who read stories with pictures can give the best performance when recalling more detailed information, and it can be concluded that pictures can improve children's understanding. [4]

5. RESULTS

1. In line with the development of information technology, it affects all lines of life, including the learning process. For that we need material that is interesting and has an allure so that children will easily understand it. The attractiveness of the presentation material affects children's understanding, namely the more interesting the content of a reading is, the easier the material will be understood by students. This is in line with research which shows that children tend to recall information from interesting but not important information or presentations, rather than recall information that is not interesting but important (Kusumawati & Rachmawati, 2017)
2. The use of attractive visual media in the learning model by utilizing information technology in the form of distance learning applications such as Zoom can increase children's curiosity and interest even though they are learning from home due to the pandemic period. In addition, it can generate motivation and stimulation in the learning process and can affect the child's psychology. In addition, visual media that is packaged in the form of illustrations and animated videos can help children improve understanding.

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