

Improving Preschool-age Children's Understanding on Healthy Food through "Healthy Food Book" at Al-Ikhlas Konggo Kindergarten

Munisa¹, Virdyra Tasril², Rizky Vita Losi³, Desmila Fajaria⁴

^{1,4}Department of Early Childhood Islamic Education, Faculty of Islamic Religion and Humanities, University of Pembangunan Panca Budi, Medan-Indonesia

²Department of Information Technology, Faculty of Science and Technology, University of Pembangunan Panca Budi, Medan-Indonesia

³Department of Computer System, Faculty of Science and Technology, University of Pembangunan Panca Budi, Medan-Indonesia

email correspondence: munisa@dosen.pancabudi.ac.id

ABSTRACT

Healthy food is balanced nutrition that meets the body's needs according to dietary guidelines and does not contain substances that are not permitted food additives. Children's knowledge about healthy eating is beneficial so that they can make appropriate food choices and maintain their eating habits. However, children's general knowledge about food is often low, leading them to consume random foods and junk food. Unhealthy eating patterns can hinder growth and development in children. This research aimed to provide understanding to children about healthy food, which is very beneficial so that children can identify healthy food types. The research was conducted on students at Al Ikhlas Konggo Kindergarten. The results of this study indicated that the use of the Healthy Food Book had an influence in improving students' knowledge about healthy food. The T-test results showed that the hypothesis was accepted with a value of 21.002, which was higher than 1.83. The Healthy Food Book is expected to be used as a learning tool to provide knowledge about healthy eating.

Keywords: *Healthy Food Book, Nutritious Food, Preschool-age Children*

INTRODUCTION

Early childhood period is their best years. Currently, there is a tremendous increase in both physical and non-physical growth. The term "golden age," which refers to the period between 0 and 6 years old, refers to the rapid physical-motor, intellectual, emotional, linguistic, and social growth that happens during this unique stage of human development. Children who actively listen gain confidence, enhance their listening abilities, and advance their language development. From an early age, children can enhance their oral language skills, increase word recognition and vocabulary, become more literate, and be able to recount stories they hear (Losi et al., 2022).

This is the most crucial time to support a child's brain development with proper care, education, and attention to their health. Attaining optimal and healthy infant development can be facilitated by education, habituation, and provision of appropriate nutrition. The educational process is crucial to a child's development since it gives them the knowledge and understanding they need to grow and develop to their full potential. Nutrition is one of the elements that affects development and growth (Nofianti, 2021).

Education is most effective for children aged two to six years. This education is not only done at home, but also in educational institutions including early childhood (Kompas, 2013). Research shows that children choose coloring as their favorite activity. The results of previous research show that nutrition education that has been carried out so far is only aimed at the mother (Sine, 2021). Nutrition education media tools are made to disseminate nutrition education to early childhood or

PAUD students (Faisal, 2002). The educational media can be in the form of activities that provide opportunities for children to explore and experiment, so as to bring out the initiative, independence and creativity of children, as well as activities that can improve understanding, concentration and develop good habits (Yuliana, 2007).

Food-based nutrients are extremely useful to the human body, and early childhood development and growth can be positively impacted by consuming the right kinds of carbs, protein, fat, vitamins, calcium, iodine, and iron. One of the characteristics of healthy food is that it is nutritionally balanced and meets the body's demands, as specified by dietary recommendations. It also doesn't contain any ingredients that aren't permitted as food additives. In addition to being able to identify food items directly in food without packaging, children can also identify the food they have ingested by reading the information on the container.

It is helpful for kids to know what foods are nutritious so they can manage their diet and make the right food choices. Nonetheless, youngsters often lack awareness, which leads to their reckless eating habits. Furthermore, eating unhealthily can make kids sick with diarrhea, vomiting, and fever. This was seen at school when a youngster with diarrhea was sent home by his parents right away. A poor diet has negative effects on children's development and growth. Additionally, knowing about healthy food is helpful in enabling kids to recognize the many kinds of healthy food. Furthermore, having an adequate knowledge of healthy food is essential for making wise food choices, maintaining a balanced diet, and preventing a number of diseases that can result from improper eating.

Learning activities in preschool facilities that are in line with the character and Developmentally Appropriate Practice (DAP) refers to a holistic education curriculum can address low maternal care for preschool-aged children (Astuti, 2016). Because preschool education is primarily focused on enhancing cognitive intelligence, the quantity of interactions and caring mothers receive has less of an impact on the development of emotional intelligence in children. Children's social and emotional competence can be developed through learning activities created in accordance with DAP (Sutarman et al., 2022).

Based on observations, it was found that there are still many parents who provide fast food for school lunches. Whereas as it is known that fast food is a type of food that is not good for consumption, especially by children. The reason parents provide fast food is because it is easier and more practical so that parents do not need to rush in preparing children's lunches. In addition, the number of portions that children bring is sometimes less balanced with their age and weight, thus reducing appetite. In addition, there are also some children who often bring food that contains coloring substances purchased in the neighborhood close to the school. In fact, many children do not want to eat rice and side dishes and prefer snacks such as wafers, instant snacks and so on. This makes it difficult for teachers to guide children about healthy food and how to eat well.

As a result, learning about wholesome eating should begin at a young age. Nutrition education programs offered in schools can help educate young children about eating healthily. Making use of things that kids enjoy is one way to incorporate learning activities. For example, you might use the storytelling method to teach kids about healthy and bad meals. Play activities, or learning while playing, can be used in schools to provide children with stimulus to expand their knowledge. Learning media can also be used to assist children better understand what educators are trying to teach them (Parapat, 2020).

According to Esteban et al. (2017), social knowledge may be promoted by kindergarten teachers reading specific picture books to their preschoolers. In particular, kindergarten teachers should stress the use of causal discourse concerning inner mental processes and sentential complements. For instance, "Little Red Riding Hood believes that her grandmother is happy because she will have a present". Indeed, a number of research studies have demonstrated that when mothers read picture books to their children, the use of cognitive state verbs by the mother promotes the growth of the child's mental understanding. More specifically, there was a significant correlation between mothers' explanatory, causal, and contrastive talk about cognition and emotion and the performance on a social understanding task. However, there was no significant correlation between mothers' simple mentions of cognition or talk about emotions.

Using books and other visual communication materials is one of them. A health food book is a book meant for young readers. The idea of healthy versus unhealthy diet is discussed in this book. Children can also learn how the virus grows in unhealthy food and ultimately causes illness with this book. Children should be able to comprehend the difference between meals that are beneficial for their bodies and those that are not through this book.

Educational psychology research shows that young children absorb visual language more than verbal language. Therefore, communicative and colorful learning media sources can increase children's interest in learning and help them to recall lessons that have been previously obtained (Kusumaningrum, 2022). Interactive books can be the right solution because they can attract children's attention to learning and interactive books are considered in accordance with the characteristics of learning in children aged 3-5 years (pre-reading). This healthy food interactive book will focus on the introduction of healthy food types by having a storyline in it. With this interactive book, it is hoped that it can provide facilities and media in introducing healthy food and helping to train the motor skills of children aged 3-5 years (Anggita et al., 2022).

Most children start formal schooling when they are 5 or 6 years old. This indicates that they spend their weekdays surrounded by classmates and concentrating more on their studies. When they're playing, kids can usually share, take turns, and cooperate to accomplish a task like building a tower. Additionally, children's play is more structured; they know the rules of a game and can even change them. By the age of five, kids are able to assess their own traits and achievements. Young children as young as five and six are starting to pick up on other people's emotions from their behavior and facial expressions. Along with learning mathematical principles, children are also picking up new abilities like writing simple phrases and independently reading picture books.

Kids are interacting with media in the house and in school. Using screen media, children between the ages of 5 and 8 spend an average of 2 hours and 56 minutes per day, mostly dividing their time between an hour and 4 minutes on television and an hour and 2 minutes on mobile devices. On average, children between the ages of 5 and 8 read 26 minutes a day or have print media read to them (Rideout, 2017). Digital citizenship competences are being taught by 60% of Kindergarten–2nd grade teachers, according to Vega and Robb's survey (2019). Based on their cognitive abilities, children at this age can start to comprehend increasingly complex aspects of media, such as correctly identifying the type of message (news, product commercial, etc.) and understanding the message of child-focused commercials and developmentally appropriate educational content. Children should be able to write, tell short stories, and create their own media between the ages of five and six. It's crucial to remember that media has an impact on children's perceptions of gender stereotypes (Signorielli, 2011), especially as they become older and interact with media more and more (Herdzina & Lauricella, 2020).

RESEARCH METHODS

This study employed a particular kind of quasi-experimental design. Sugiyono (2022) defines a quasi-experiment as research that approaches the characteristics of a true experiment. The purpose of this study is to evaluate the cause-and-effect relationship hypothesis and the direct impact of one variable on other variables. There is an experimental class and a control class in the quasi-experimental design, but the control class is unable to completely regulate the outside factors that impact the experiment's execution. The design used in this study was a pretest and posttest group design.

In this study, a number of characteristics were determined for the research subjects, including:

1. Sample Characteristics

The characteristics of respondents in this study are children who tend to dislike eating vegetables and other nutritious foods.

2. Number of Samples

The sample is part of the number and characteristics of the population. In this study, to determine the sample, researchers used purposive sampling technique. Purposive sampling is a sampling technique where in choosing the subject-object sample, sample members are taken in such a way and the sample is determined deliberately by the researcher based on certain considerations so that it is hoped that the sample has properties and reflects the characteristics of the population. Because the research

population is too large and it is not possible for prospective researchers to study it simultaneously. So, it is necessary to take a representative of the population who will be the object of research, or what is called a sample which can be done by selecting a sample based on purposive sampling depending on what criteria are used.

The sample in this study based on purposive sampling was part of the students at Al Ikhlas Konggo Kindergarten who were still lacking in healthy food knowledge. The sample was 10 students in class B who had less knowledge about healthy food. The instrument in collecting research data is a tool to measure the value of the variable under study. Thus, the number of instruments to be used for researchers will depend on the number of variables studied. In this study, data was collected through Checklist. Then, the indicator is used as a starting point for compiling instrument items which can be in the form of questions. The data was analyzed by T-Test through Pretest-Posttest experiment.

RESULTS AND DISCUSSION

Result

The results of this study were obtained from the data while conducting the research at Al Ikhlas Konggo Kindergarten, namely in class B1. In general, there were two data that had been obtained in this study, namely before treatment and after treatment. This study was conducted to determine how effective Healthy Food Book was in providing an understanding of healthy food in early childhood at Al Ikhlas Konggo Kindergarten.

1. The results of research on the provision of Healthy Food Book were effective for increasing understanding of healthy food in early childhood at Al Ikhlas Konggo Kindergarten

The following was a table that described children's activities in studying the Healthy Food Book

to increase understanding of healthy food in early childhood.

Table 1. Children's Ability to Learn Healthy Food Book to Improve Understanding of Healthy Food in Early Childhood

No.	Evaluated Aspects	Score			
		1	2	3	4
1	Students can understand what is meant by healthy food through Healthy Food Book.				√
2	Students can sort the foods contained in the staple food.				√
3	Students can recognize the benefits of healthy food healthy food.			√	
4	Students can distinguish between healthy and unhealthy foods.			√	

Based on the table of students' ability to understand Healthy Food Book to increase understanding of healthy food in early childhood with four indicators, in the first aspect the child gets a score of 4 (very good) the student can understand what is meant by healthy food so that the student is able to explain what healthy food is. In the second aspect, the child gets a score of 4 (very good) the child's ability to sort healthy staple foods is very good because they are able to sort neatly based on their order.

In the third aspect, students get a score of 3 (good) the child's ability to know the benefits of healthy food is good this is because students are still often confused about the purpose of students to consume healthy food properly. Then, in the fourth aspect students get a score of 3 (good) students' ability to distinguish healthy and unhealthy foods is good because it is explained in the Healthy Food Book.

2. The results of research on teacher activities in using the Healthy Food Book to increase understanding of healthy food in early childhood at Al Ikhlas Konggo Kindergarten

The following is a table that illustrates teacher activities in using Healthy Food Book to increase understanding of healthy food in early childhood as follows.

Table 2. The Teacher's Activity in Using Healthy Food Book

No.	Evaluated Aspects	Score			
		1	2	3	4
1	Readiness of space, tools and learning media.			√	
2	Doing gathering/circle time activities.			√	
3	Skill in explaining the material.			√	
4	Communication style and use of spoken language.				√
5	Assessment.				√

The table above showed that the teacher's activity in using the Healthy Food Book, there were 5 aspects that must be assessed, namely the readiness of space, tools, and learning media, conducting gathering/circle time activities, and skills in explaining getting a score of 3. Then, in the aspect of communication style and the use of spoken language, and assessment get a score of 4. Then, the overall of the teacher's activity in using the Healthy Food Book obtained an average score of 3.4 which is in the very good category. This shows that the teacher in the learning process is very prepared according to the learning objectives, has linked the material with the child's initial experience in context, and activates children in the room in understanding healthy food patterns.

The child's response in carrying out learning activities through the provision of Healthy Food Book media has been very good, in providing these explanations, children mainly listen to the directions and instructions of the teacher and researchers themselves when they want to provide explanations about healthy food, they bring examples of healthy food so as to make children more enthusiastic in participating in the class. Through the Healthy Food Book, children can easily understand that healthy food is very important for children's lives.

The students' understanding about healthy food by using Healthy Food Book could be explained by this graphic. The graphic showed about the students' pretest-posttest score.

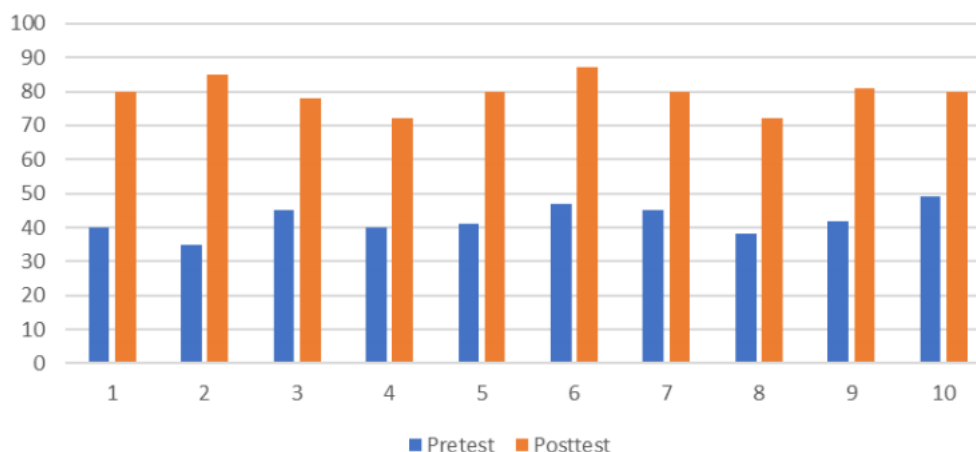


Figure 1. The Graphic of Average Individual Student Pretest and Posttest Scores

After conducting the T-Test, hypothesis testing was performed to determine whether the proposed hypothesis was accepted or rejected. The formulated hypothesis aimed to assess the effectiveness of the Healthy Food Book in enhancing the understanding of healthy eating among students at Al Ikhlas Konggo Kindergarten. Hypothesis testing was conducted by comparing the T-Test statistic (T-observed) with the T-table using the scores obtained from the pretest and posttest. The null hypothesis (H_0) is rejected if the T-observed is less than the T-table, while the alternative hypothesis (H_a) is accepted if the T-observed is greater than the T-table.

Based on the T-test, since the T-observed (21.002) was higher than the critical T-value (1.83), H_0 was rejected. This meant that at a 95% confidence level, there was a significant difference between the scores of the pretest and posttest. The initial test was conducted to gauge the

understanding of healthy eating without using the Healthy Food Book, while the final test was conducted to assess the impact of using the Healthy Food Book on understanding healthy eating. Therefore, the hypothesis results above indicated that the Healthy Food Book had an influence on enhancing the understanding of healthy eating among students, as H_a was accepted.

Discussion

Effective learning will proceed smoothly when all components work together well, and one of the key components in education is the educator and the learners. Teachers or educators are the backbone of every educational program prepared to achieve educational goals at the early childhood level, which cannot be separated from the role of a teacher. With teachers in the classroom and teaching assistants, the learning process for children will proceed smoothly. In general, the research results on the effectiveness of the Healthy Food Book in enhancing the understanding of healthy eating among students at Al Ikhlas Konggo Kindergarten were categorized as very good based on the evaluation of each activity.

1. Children's Ability in Using the Healthy Food Book

Children's ability in using the healthy food book has a very positive influence, especially in enhancing understanding of healthy eating among young children. This is because at this stage, all aspects of children's development are quickly absorbed by them; children can easily think, remember, and communicate, which enhances their logical thinking process. The appropriate use of learning media enables children to recognize healthy foods from a young age, thus enabling them to distinguish between healthy and unhealthy foods.

The research conducted at Al Ikhlas Konggo Kindergarten showed that the presence of the healthy food book influenced the improvement of understanding healthy eating among students. This can be observed based on the results of observations and tasks given by researchers and teachers to children during the learning process activities. Subsequently, after implementing the healthy food book media, children become more enthusiastic and eager to learn about healthy foods.

The research result was found by Khamidah & Sholichah (2022) which used a similar visual media, and the result showed that digital pop-up media as an effort to create a generation that is technology-savvy can be designed and developed by teachers to enhance various aspects of child development in the form of audiovisual media using Microsoft PowerPoint applications. Learning via projects instructional tools help students study through a media unit. Additionally, students can create media that is appropriate for learning needs and components of child development, think methodically and sequentially, produce motivation, and participate in learning in a planned and direct manner. A few of these are extra points for these well-made instructional resources. The assembled course materials are intended to be helpful for instructors in the media unit (Hayati & Syaikhu, 2020).

2. Teacher Activities in Implementing the Healthy Food Book

Overall, the teacher's activities, including using games like puzzles and colored blocks during the pretest, went well. However, during the process, the children participated less, lacked enthusiasm, and were busy with their own activities. Therefore, the colorful and pictorial learning media of the book attracted the children's attention as a whole. After conducting the posttest with several treatments using the Healthy Food Book media, the children seemed enthusiastic about learning about healthy foods that would be demonstrated during the learning process.

The research results provided by the teacher during the use of the Healthy Food Book media were eagerly awaited by the children, as the teacher and researcher also brought examples of healthy foods, making the children happy and excited during the activities. Creative learning media are able to introduce new information and provide understanding to children easily because they can capture children's attention.

The more leisure time children have in a day, the more likely they will become bored, and the more bored they feel, the greater their desire to access the internet. Therefore, it's not wrong to redirect children to activities that can occupy their days, like reading the Healthy Food Book. These activities can certainly be utilized for their benefit, such as English lessons, dance classes, martial arts lessons, and even tutoring after school. When children are busy with various activities, it naturally

makes them tired. And after these activities, what they most desire is to rest. This way, their addiction will start to shift towards more beneficial things in their lives (Widya, 2020). Interactive multimedia in health and nutrition education can stimulate curiosity, spark new interests, motivate, and engage students in learning. As a result, it can be said that interactive multimedia in health education is an effective learning tool that can influence young people (Rozana et al., 2022).

CONCLUSIONS

Based on the research findings and discussion, the researchers can conclude that the Healthy Food Book media had an influence on enhancing understanding of healthy eating among children. This could be observed through the difference between pretest and posttest results, which showed 21.002 was higher than 1.83. Thus, H_0 was rejected, indicating a significant difference at a 95% confidence level between scores obtained from the initial and final tests. This was evidenced by hypothesis testing using the T-Test, where the obtained T-value was higher than T-Table, meaning H_0 was rejected and H_a was accepted.

REFERENCES

- Anggita, R. D., Aji, R. I., & Sutejo, A. (2022). BUKU INTERAKTIF MAKANAN SEHAT SEBAGI UPAYA PENGENALAN PADA ANAK (PRABACA) USIA 3-5 TAHUN. *Jurnal Imajinasi*, 6(1), 1–6.
- Astuti. (2016). Life Skills Training in Building Entrepreneurial Attitudes (Study at the Child Development Center (PPA) IO-583 Condrokusumo Semarang City). Thesis of Semarang State University.
- Esteban, M., Sidera, F., Serrano, J., Amadó, A., & Rostan, C. (2017). Improving Social Understanding of Preschool Children: Evaluation of a Training Program. *Electronic Journal of Research in Education Psychology*, 8(2), 843–860. <https://doi.org/10.25115/ejrep.v8i21.1386>
- Faisal, A. (2002). Model Pengasuhan anak bawah dua tahun dalam meningkatkan status gizi dan perkembangan psikososial. Tesis. Bogor: Sekolah Pasca Sarjana, Institut Pertanian Bogor.
- Hayati, M., & Syaikh, A. (2020). Project-based learning in Media Learning Material Development for Early Childhood Education. *Al-Athfal: Jurnal Pendidikan Anak*, 6(2), 147–160. <https://doi.org/10.14421/al-athfal.2020.62-05>
- Herdzina, J., & Lauricella, A. R. (2020). *Media Literacy in Early Childhood Report: Framework, Child Development Guidelines, and Tips for Implementation*. Technology in Early Childhood (TEC) Center.
- Khamidah, A., & Sholichah, N. I. (2022). Digital Pop Up Learning Media for Early Childhood Cognitive Development. *Indonesian Journal of Early Childhood Educational Research (IJECER)*, 1(1), 11–19. <https://doi.org/10.31958/ijecer.v1i1.5833>
- Kompas. (2013). Ajari anak mengerti gizi sejak dini. In: <http://health.kompas.com/read/2013/05/21/14452937/Ajari.Anak.Mengerti.Gizi.Sejak.Dini> (Diunduh 23 Juni 2024).
- Kusumaningrum, N. (2022). TA: Perancangan Buku Interaktif Manfaat Konsumsi Buah dan Sayuran Sebagai Upaya Pengenalan untuk Anak Usia 3 – 5 Tahun (Universitas Dinamika).
- Losi, R. V., Tasril, V., Widya, R., & Akbar, M. (2022). Using Storytelling to Develop English Vocabulary on Early Age Children Measured by Mean Length of Utterance (MLU). *International Journal of English and Applied Linguistics (IJEAL)*, 2(1), 179–187. <https://doi.org/10.47709/ijeal.v2i1.1470>
- Nofianti, R. (2021). *Dasar-Dasar Pendidikan Anak Usia Dini*. Jawa Barat: Edu Publisher.
- Parapat, A. (2020). Strategi Pembelajaran Anak Usia Dini: Panduan Bagi Orang Tua, Guru, Mahasiswa, dan Praktisi PAUD. Jawa Barat: Edu Publisher.
- Rideout, V. (2017). *The Common Sense census: Media use by kids age zero to eight*. San Francisco, CA: Common Sense Media.
- Rozana, S., Widya, R., & Tasril, V. (2022). PENGEMBANGAN MULTIMEDIA BERBASIS INTERAKTIF DALAM PENDIDIKAN KESEHATAN DAN NUTRISI ANAK DI KOTA PARI. *Jurnal Warta Dharmawangsa*, 16(4), 855–863.

- Signorielli, N. (2011). Television's gender-role images and contribution to stereotyping: Past, present, and future. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media* (2nd ed., pp. 321–339). Sage.
- Sine, J. G. L. (2021). MODEL EDUKASI GIZI DENGAN MEDIA BUKU MEWARNAI UNTUK SISWA PAUD DI KELURAHAN OEBA. *KUPANG JOURNAL OF FOOD AND NUTRITION RESEARCH*, 2(2), 6–13.
- Sugiyono. (2022). *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.
- Sutarman, S., Nurhayati, N., Utami, R. D., Idarianty, I., & Akzam, I. (2022). Implementation of character based integrated holistic education in early childhood education. *International Journal of Health Sciences*, 6(4), 5405–5419. <https://doi.org/10.53730/ijhs.v6ns4.10923>
- Vega, V., & Robb, M. B. (2019). *The Common Sense census: Inside the 21st-century classroom*. San Francisco, CA: Common Sense Media.
- Widya, R. (2020). Dampak Negatif Kecanduan Gadget Terhadap Perilaku Anak Usia Dini dan Penanganannya di PAUD Ummul Habibah. *Jurnal Ilmiah Abdi Ilmu*, 13(1), 29–34.
- Yuliana. (2007). Pengaruh penyuluhan gizi dan stimulasi psikososial terhadap pertumbuhan dan perkembangan anak usia prasekolah. Tesis. Bogor: Sekolah Pasca Sarjana, Institut Pertanian Bogor.