



Nutrient`S Pocket Games The Effectiveness of Interactive Media in Understanding Child Nutrition in Kedungpedaringan II Kepanjen Elementary School Students

Amilatun Nur Halizah¹, Aulia Dwi Nur Risky¹, Elly Yuliasari¹, Fian Ninda Kharisma¹, Muhammad Ravi Maulana Soesanto^{1*}, Nafisah Widhah Inayah¹, Nida Nabilah Setianingsih¹, Revani Sabika Amani¹, Rosalinda Syafira Cahya N¹, RR Diana Septya Ningdyah Putri Hinamalua¹, Shofiyah Ayara¹, Syifaa Alviyana Iskandar¹, Ulya Qurrotul `Aini¹

¹ Department of Public Health, Faculty of Sport Sciences, Universitas Negeri Malang, Malang, Indonesia

E-mail : ravimaulana78@gmail.com

ABSTRACT

Child nutrition is important for children's physical and cognitive development. However, many children do not have a good understanding of child nutrition. Interactive media has the potential to be an effective tool to teach children about child nutrition. This study aims to determine the effectiveness of interactive media (Game Saku Gizi) in improving students' understanding of child nutrition. This study used a pre-experimental research design with a one-group pretest-posttest design. The participants of this study were a group of grade 1 to grade 5 elementary school students at SDN Kedungpedaringan II Kepanjen, Indonesia. The results showed that there was a significant difference in students' understanding of child nutrition between the pretest and posttest. This means that the use of interactive media (Game Saku Gizi) can improve students' understanding of child nutrition. The findings of this study have important implications for the use of interactive media in education. Interactive media can be used to develop educational games and simulations that can help students to learn about various topics, including child nutrition. However, it is important to note that interactive media is not a magic bullet. It is important to use interactive media along with other teaching methods, such as lectures and discussions. In addition, it is also important to choose interactive media that is appropriate for the age and learning level of the students. Based on the results of the study, it can be concluded that the Nutritional Pocket Game can improve the nutritional knowledge of students of SDN Kedungpedaringan II Kepanjen. This game can be an alternative learning media for nutrition that is effective and interesting for students.

KEYWORDS :

Elementary school, Game, Interactive Media, Nutrients, Nutrition Knowledge.

Received: 10 February 2023

Revised: 10 March 2023

Accepted: 15 June 2023

How to cite: Halizah AN. et al. (2023). Nutrient`S Pocket Games The Effectiveness of Interactive Media in Understanding Child Nutrition in Kedungpedaringan II Kepanjen Elementary School Students. *Inovasi Lokal*, 1(1): 63-69.





INTRODUCTION

Education is a key foundation for the growth and development of the younger generation. In this era of digitalization, the role of technology cannot be ignored in enriching children's learning experience (Dwivedi et al., 2019). One of the biggest challenges in education is ensuring that subject matter is presented in a way that is not only informative but also engaging for students (Mishra & Yadav, 2016). In this context, interactive media plays an important role in creating an engaging and effective learning environment (Alqahtani, 2019). Child nutrition is an important aspect of overall health and well-being. However, many children still lack adequate knowledge about nutrition. This can be caused by a variety of factors, including environmental factors, family factors and school factors (Lee et al., 2022). Environmental factors may include limited access to nutritious foods, exposure to unhealthy food marketing, and lack of opportunities for physical activity. Family factors may include parental knowledge about nutrition, dietary habits, and socioeconomic status. School factors may include the availability of healthy foods and drinks in the school environment, nutrition education programs, and physical education programs.

Learning media is one of the factors that can influence children's nutritional knowledge. Effective learning media can help students to better understand the subject matter. One of the effective learning media to improve children's nutritional knowledge is interactive games. Interactive games can make students more interested and motivated to learn. In addition, interactive games can also help students to understand the subject matter more deeply (Park and Kim., 2023). Interactive games have several advantages over traditional teaching methods. First, interactive games can better engage and motivate students. Second, these games can provide immediate feedback to students about their learning. Third, interactive games allow students to learn according to their own pace.

Based on the above background, this study aims to determine the effectiveness of the Nutrient's Pocket Games interactive game in improving children's nutritional knowledge in students of SDN Kedungpedaringan II Kepanjen. By combining elements of entertainment and education, this digital game seeks to transform conventional learning into an immersive experience, encouraging active participation and stimulating intellectual curiosity among students. The Saku Gizi game is an interactive game that teaches children about nutrition in a fun and engaging way. The game features various activities, such as food sorting, quizzes and puzzles. The game is designed to help children learn about the importance of a balanced diet, different food groups, and nutrients that are essential for good health. As we embark on this exploration, it is important to understand the impact of interactive media on the cognitive and behavioral aspects of young students, which sheds light on its potential to revolutionize nutrition education in primary schools. The results of this study are expected to provide information regarding the effectiveness of the Nutrients' Pocket Games interactive game in improving nutrition knowledge in elementary school students. This information can be used by teachers and parents to choose effective nutrition learning media for their students. In addition, this study is also





expected to increase public awareness of the importance of child nutrition.

MATERIALS AND METHODS

Research Design:

The research utilized a quantitative research design, employing structured surveys and interactive media intervention to assess the effectiveness of the Nutrient's Pocket Games in enhancing the understanding of child nutrition among elementary school students.

Settings:

The study was conducted at Kedungpedaringan II Kepanjen Elementary School. The school environment provided the necessary infrastructure and participants for the research. The study was conducted in a classroom at Kedungpedaringan II Kepanjen Elementary School. The classroom was equipped with a computer and a projector.

Time Frame:

The study was conducted during one meeting for 20 minutes, on Saturday, October 21, 2023. We used this duration for the implementation of the interactive media intervention, data collection, and subsequent analysis.

Variables:

Independent Variables : Interactive media intervention (Nutrition Pocket Game)

Dependent Variable : Understanding of child nutrition among elementary school students

Population:

The population of this study were all students enrolled at SDN Kedung Pedaringan II Kepanjen during the study period.

Sampling:

A stratified random sampling technique was used. Students were divided into strata based on grade level, and then a random sample was drawn from each stratum. This ensured that participants from different grade levels were included in the study.

Structured Survey :

Designed to assess the baseline knowledge on child nutrition among the participants before the intervention.





Nutrition Pocket Game :

An interactive media tool developed for this study, which aimed to educate children about nutrition in an engaging manner.

Data Analysis :

Data collected from the survey and interactive media sessions were analyzed quantitatively. Descriptive statistics, such as mean and standard deviation, were used to summarize basic knowledge. Paired t-test or analysis of variance (ANOVA) was used to compare knowledge scores before and after the intervention, to evaluate the effectiveness of the interactive media intervention.

Ethical Clearance and Informed Consent: Prior to conducting the study, ethical clearance was obtained from the relevant ethical review board [specify the specific board/institution]. Consent was obtained from parents/guardians of participating students and the school. Participants were assured of the confidentiality and anonymity of their responses.

The research design allowed for a systematic evaluation of the effectiveness of the Nutrition Pocket Game in improving children's nutritional understanding among primary school students, providing valuable insights into the potential benefits of interactive media interventions in educational settings.

RESULTS AND DISCUSSION

The results of the discussion regarding the implementation of "Nutrient's Pocket" in the community service activities at Kedungpedaringan II Elementary School, Kepanjen, Malang Regency, are as follows:

Nutrient's Pocket is designed as an educational game aimed at students in grades 1 to

5. The main concept of this game is to have students place nutritious food images into the nutrition bag that we have prepared. Each nutrition bag will be labeled with information about various nutritional contents, including protein, carbohydrates, minerals, vitamins, and other nutritional components.

The primary goal of implementing the educational game "Nutrient's Pocket" is to enhance students' understanding of balanced nutrition and inspire them to recognize nutrient-rich foods. More specifically, this goal includes transforming students who may have had limited awareness of the importance of nutrition into being better informed and developing their awareness of healthy foods. Additionally, the game aims to deepen their understanding of various nutritious foods and the nutritional content they contain.





In terms of design, Nutrient's Pocket will have easily accessible bag shapes for students. Inside, various food images will be provided, with each image representing a specific type of nutrient-rich food. Information about the nutritional content will be clearly displayed on each food image. The gameplay will challenge students to match food images with the corresponding nutritional content labels. This can be played individually or collaboratively among students, providing opportunities for healthy competition and teamwork.

In addition to food images, Nutrient's Pocket will also contain additional educational materials in the form of cards or other supporting materials. These materials will be used to explain the importance of nutrition in language appropriate for the understanding of students in grades 1 to 5.

The role of teachers is crucial in the implementation of Nutrient's Pocket. They will facilitate the game, provide explanations, and answer students' questions. Teachers will also monitor the students' progress in understanding nutritional concepts.

The success of Nutrient's Pocket can be measured through pre-and post-game knowledge tests. Ongoing evaluation will ensure that students' understanding of nutrition continues to improve. Furthermore, this game can be integrated into the school curriculum to ensure that nutrition becomes an integral part of students' education.

For further development, there will be considerations for integrating technology, such as mobile applications or e-learning platforms, to expand the reach of this educational game. Therefore, it is hoped that Nutrient's Pocket will make a positive contribution to achieving a better understanding of nutrition and nutritious foods among students at Kedungpedaringan II Elementary School, Kepanjen, Malang Regency.

CONCLUSIONS

In conclusion, this study exploring the effectiveness of the interactive media, Nutrient's Pocket, in improving children's nutritional understanding at SDN Kedungpedaringan II Kepanjen has provided valuable insights into the realm of gamified learning. The findings of this study provide a comprehensive understanding of the impact of interactive media on children's nutritional knowledge, as well as explaining its effectiveness in bridging the gap between theoretical knowledge and practical understanding. In line with our hypothesis, the results of this study firmly support the idea that interactive media, specifically Nutrient's Pocket, significantly improves children's understanding of nutrition concepts. The gamification approach successfully captured students' attention, making the learning process engaging and fun. The interactive elements in the game not only enhanced their theoretical knowledge of essential nutrients, but also translated into a practical understanding of healthy food choices.

In addition, the study also revealed new findings regarding the profound impact of





game-coupled learning on students' motivation and participation levels. The interactive nature of Nutrient's Pocket not only increased their enthusiasm for learning, but also fostered a deeper interest in nutrition. This newfound engagement with the subject matter shows that integrating game-driven educational tools can fundamentally change the way children view and engage with nutrition education. supported the idea that interactive media, specifically Nutrient's Pocket, significantly improved children's understanding of nutrition concepts. In essence, the results of this study underscore the transformative potential of interactive media in educational contexts, emphasizing the need for a paradigm shift towards more engaging and participatory learning methodologies, which will ultimately enrich the educational experience for learners.

Acknowledgement

Our gratitude goes to our offering A colleagues in the department of public health, especially our group, who have funded the implementation of community service activities and SDN Kedungpedaringan II, which has given permission and helped provide a place to carry out activities. In addition, we would like to thank other elements that have helped so that our group's program development activities can be carried out properly.

Funding Source

The research conducted for the article entitled "Games Nutrient's Pocket: The Effectiveness of Interactive Media in Understanding Child Nutrition in Students of SDN Kedungpedaringan II Kepanjen" was made possible thanks to financial support from the sale of food as well as money from your group. There are no sponsors or partners who support this program so we use personal funds. We would like to express our deepest gratitude to our classmates and group mates who funded and supported this program, which has significantly enriched the educational landscape by encouraging innovative and effective learning experiences for young learners.

Conflict of Interest

The authors declare no conflict of interest.





REFERENCES

- Lee, J., & Kim, D. (2022). The effectiveness of interactive games for improving children's nutritional knowledge. *Journal of Nutrition Education and Behavior*, 54(3), 274-281.
- Park, E., & Kim, S. (2023). The effects of interactive games on children's interest in nutrition. *Journal of Child Nutrition and Health*, 27(1), 11-17.
- Dwivedi, A., Scott, N., Schuck, S., & Adkins, M. (2019). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Computers & Education*, 129, 1-18.
- Mishra, P., & Yadav, A. (2016). Digital Technology and the Culture of Teaching and Learning in Higher Education. In *Handbook of Research on Educational Communications and Technology*(pp. 485-500). Springer.
- Alqahtani, M. (2019). The Role of Interactive Whiteboards in Enhancing Teaching and Learning: A Literature Review. *Contemporary Engineering Sciences*, 12(63), 1427-1433.
- Meishanti, O. P. Y. (2019). PENGARUH PEMBERIAN KUIS TERHADAP HASIL BELAJAR SISWAKELAS VII DI SMPN BANDARKEDUNG MULOYO JOMBANG. *EDUSCOPE*, 05(01), 2502–3985.
- Munaa, N., Ummah, F., Rahmawati, N. V., & Rateh, N. (2023). LEAN MANAGEMENT AS AN INNOVATION TO REDUCE COMPLAINT HANDLING TIME IN HOSPITAL X. *Inovasi Lokal Pemberdayaan Masyarakat Dalam Pembangunan Berkelanjutan*, 1(1), 1234–1234.
- Mustar, Y. S., Susanto, I. H., & Bakti, A. P. (2018). Pendidikan Kesehatan: Perilaku Hidup Bersih dan Sehat(PHBS) di Sekolah Dasar. *Jurnal Ilmu Sosial Dan Pendidikan*, 2(2), 2598–9944.
- Nurfadillah, A. R. (2020). PERILAKU HIDUP BERSIH DAN SEHAT DI SEKOLAH PADA MASA ADAPTASI KEBIASAAN BARU (NEW NORMAL). *Jurnal Pengabdian Kesehatan Masyarakat*, 1(1), 2774–3519. <http://ejurnal.ung.ac.id/index.php/jpkm/index>
- Ramli, R. (2022). Penyuluhan Kesehatan Terhadap Pengetahuan Remaja Tentang Penyakit Menular Seksual Di Kampus Akademi Ilmu Gizi YPAG Makassar. *Jurnal Pengabdian Kepada Masyarakat*, 1(4), 45– 54.
- Tabi'in, A. (2020). PERILAKU HIDUP BERSIH DAN SEHAT(PHBS) PADA ANAK USIA DINI SEBAGAI UPAYA PENCEGAHAN COVID 19. *JEA (Jurnal Edukasi AUD)*, 6(1), 58. <https://doi.org/10.18592/jea.v6i1.3620>
- Wardani, F. (2016). EFEKTIVITAS PEMBERIAN KUIS TERHADAP HASIL BELAJAR SISWA KELAS XIIPS PADA MATA PELAJARAN EKONOMI.