

DEVELOPMENT OF A LEARNING MEDIUM BASED ON EFAS TRADITIONAL GAME (*ENGKLEK FUN AND SMART*) TO IMPROVE STUDENTS' COMMUNICATION ABILITY IN THEMATIC LEARNING

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ABSTRACT

Traditional games must be adapted for the present since they have cultural values that need to be conserved for future generations. This study attempts to create an EFAS (Engklek Fun and Smart) medium version of a typical game product. With research experience at IES Al-Ittihadiyah Berastagi, this study applies the Research and Development (R&D) technique. Forty-five first graders of Islamic Elementary School (IES) Al-Ittihadiyah Berastagi became the study participants. The findings indicate that the EFAS medium is recognized as valid. The "Very Valid" category showed an 89.63% score for the EFAS medium. It is also claimed that the EFAS medium is useful. This information came from a survey of the students and teachers' opinions. Twenty-five students completed a questionnaire on the EFAS medium, and the questionnaire received 9.6% in the "Very Practical" category. A score of 97.5% in the "Very Practical" category came from the teachers' response to the supplied statement. The results of the two questionnaires indicate that the teachers and students' replies are categorized as being very practical. Third, the EFAS medium is deemed operational. This was demonstrated by the fact that the students were able to respond to the ASK and DO question instruments both in writing and orally with a score of 92% during the learning process utilizing EFAS. Written responses to EFAS infer that it can be an "effective" medium, whereas oral responses indicate that the medium can help students develop their communication abilities. This justifies the declaration that the EFAS medium is legitimate, applicable, and useful for enhancing students' communication skills.

Keywords: EFAS; learning media; traditional games

INTRODUCTION

Children aged 6-12 years old are children who have started primary school. At this stage, children begin to learn basic knowledge, skills, and attitudes.^{1,2,3} Therefore, it is undeniable that the world of children is a world of games. Every child likes to play, be

¹ Abdul Khobir, "Upaya Mendidik Anak Melalui Permainan Edukatif," in *Forum Tarbiyah*, vol. 7 (Fakultas Tarbiyah IAIN Pekalongan, 2009), 197–208.

² Pramudia Ananda, *et.al.*, "Social Effects of Lato-lato Games on Children of SD/MI Age" in *Journal of Contemporary Islamic Primary Education*, vol. 2 no. 1, (2023), 63-68. <https://doi.org/10.61253/jcipe.v1i3.97>.

³ Ni Made Swasti Wulanyani, *et.al.*, "A Preliminary Study to Access the Use of a "Snakes and Ladders" Board Game in Improving the Knowledge of Elementary School Children About Taeniasis" *Acta Tropica* 199, (2019). <https://doi.org/10.1016/j.actatropica.2019.105117>.



it playing alone or playing with friends.^{4,5,6} Playing is an essential medium in the thought processes to provide the experience of interacting with the environment, which means that learning does not have to be in the classroom. One type of learning resource can be found in the natural environment.^{7,8,9}

Learning by prioritizing the natural environment as a source of learning (resource-based learning) is a learner-oriented learning system.^{10,11} At the same time, teaching is a process of regulating and organizing the environment around students so that it can grow and encourage students to carry out learning activities.^{12, 13, 14} For example, with

⁴ Muhammad Istiqlal, "Pengembangan Multimedia Interaktif dalam Pembelajaran Matematika," *JIPMat* 2, no. 1 (2017).

⁵ Johan Irmansyah, et.al., "Children's Social Skills Through Traditional Sport Games in Primary Schools" *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 39, no. 1 (2020). <http://dx.doi.org/10.21831/cp.v39i1.28210>.

⁶ David Furió, et.al., "Evaluation of Learning Outcomes Using an Educational iPhone Game vs. Traditional Game," *Computers and Education* 64, (May 2013): 1-23. <https://doi.org/10.1016/j.compedu.2012.12.001>.

⁷ Ying Peng, "The New Teaching Requirements and the Influence of Assessment: A Case Study of College English Reform in China" (PhD Thesis, University of Huddersfield, 2011).

⁸ Wawan Sundawan Suherman, et.al., "Development of a Traditional Children Game Based Instructional Model to Optimize Kindergarteners' Fundamental Motor Skill," *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 38, no. 2 (2019). <http://dx.doi.org/10.21831/cp.v38i2.25289>.

⁹ Charles, M. D. A. G., et.al. "The Effectiveness of Traditional Games Intervention Program in the Improvement of Form One School-Age Children's Motor Skills Related Performance Components" *Journal of Physical Education and Sport* 17, no. 3 (2017): 925-930. <http://dx.doi.org/10.7752/jpes.2017.s3141>.

¹⁰ Joanne Pattison-Meek, "The Unsung Heroes of Practicum Mentorship: Moving Toward a Triad Model Inclusive of Student Voice to Support Student Teachers' Professional Learning" *Teaching and Teacher Education* 143, (June 2024). <https://doi.org/10.1016/j.tate.2024.104553>.

¹¹ Beatriz Cabellos, et.al., "The Moderating Role of School Facilitating Conditions and Attitudes Towards ICT on Teachers' ICT Use and Emphasis on Developing Students' Digital Skills," *Computers in Human Behavior* 150, (January 2024). <https://doi.org/10.1016/j.chb.2023.107994>.

¹² S. C. Ang, et.al, "Promoting Social and Emotional Learning Outcomes in Physical Education: Insights from a School-Based Research Project in Singapore" *Asia-Pacific Journal of Health, Sport and Physical Education* 4, no. 3 (2013): 267-286. <https://doi.org/10.1080/18377122.2013.836768>.

¹³ Magdalena Claro, et.al, "Teaching in a Digital Environment (TIDE): Defining and Measuring Teachers' Capacity to Develop Students' Digital Information and Communication Skills" *Computers & Education* 121, (2018): 162-174. <https://doi.org/10.1016/j.compedu.2018.03.001>.

¹⁴ Mahjabin Chowdhury, et.al, "Digital Game-Based Language Learning for Vocabulary Development" *Computers & Education Open* 6, (June 2024). <https://doi.org/10.1016/j.caeo.2024.100160>.

experience while playing, students will sharpen their memory. It will also encourage students' language development.^{15,16,17}

The Assessment and Teaching of 21st Century Skills state that communication skills are one of the skills that must be possessed by someone in order to compete in the future.^{18,19,20} Communication skills are skills to express new thoughts, ideas, knowledge, or information in writing or orally.^{21,22} Therefore, the purpose of education is an inevitable part of the future.^{23,24,25}

Modern knowledge often makes humans forget the history of their ancestors.^{26,27,28} The emergence of technology-based games makes children no longer

¹⁵ Esther Care, Patrick Griffin, and Barry McGaw, *Assessment and Teaching of 21st Century Skills* (Springer, 2012).

¹⁶ Jalal Rajeh Hanaysha, et.al., "Impact of Classroom Environment, Teacher Competency, Information and Communication Technology Resources, and University Facilities on Student Engagement and Academic Performance," *International Journal of Information Management Data Insight* 3, no. 2 (2023). <https://doi.org/10.1016/j.jjime.2023.100188>.

¹⁷ Tjark Huizinga, et.al., "Student and Teacher Perceptions of Community of Inquiry in Hybrid Virtual Classrooms," *Heliyon* 8, no. 12 (December 2022). <https://doi.org/10.1016/j.heliyon.2022.e12549>.

¹⁸ James C. Lester, et.al., "Designing Game-Based Learning Environments for Elementary Science Education: A Narrative-Centered Learning Perspective," *Information Sciences* 264, (April 2014): 4-18. <https://doi.org/10.1016/j.ins.2013.09.005>.

¹⁹ AzamAzam OthmanOthman, et.al., "Intercultural Communication Experiences among Students and Teachers: Implication to in-Service Teacher Professional Development," *Journal of Multicultural Education* 14, no. 3-4 (September 2020): 223-238. <https://doi.org/10.1108/JME-04-2020-0024>.

²⁰ Tianyi Ma, et.al., "The Role of Parenting Self-Efficacy on Teacher-Child Relationships and Parent-Teacher Communication: Evidence from an Australian National Longitudinal Study," *Journal of School Psychology* 103, (April, 2024). <https://doi.org/10.1016/j.jsp.2024.101296>.

²¹ Tanomchit Sangcharoon, "Reading and Writing Skills Development: The Use of SQ5R Technique" (PhD Thesis, Prince of Songkla University, 2010).

²² Fazilat Siddiq, et.al., "Teachers' Emphasis on Developing Students' Digital Information and Communication Skills (TEDDICS): A New Construct in 21st Century Education," *Computers & Education* 92-93, (January-February 2016): 1-14. <https://doi.org/10.1016/j.compedu.2015.10.006>.

²³ Nuur Wachid Abdul Majid and Taufik Ridwan, "Development of the Traditional Digital Games for Strengthening Childhood's Verbal Skill," *Jurnal Pendidikan Vokasi* 9, no. 1 (2019): 75-82.

²⁴ Pei-Hsin Li, et.al., "Student Engagement and Teacher Emotions in Student-Teacher Dyads: The Role of Teacher Involvement," *Learning and Instruction* 91, (June 2024). <https://doi.org/10.1016/j.learninstruc.2024.101876>.

²⁵ Khamim Zarkasih Putro, et.al., "Clown Children: Quo Vadis Guarantee for Children with Special Needs in the Era of Covid-19," *Al-Ishlah: Jurnal Pendidikan* 13, no. 2 (2021). <https://doi.org/10.35445/alishlah.v13i2.761>.

²⁶ Idan Zak-Doron, et.al., "Teachers' Roles in Facilitating, Delimiting, and Balancing Student Participation Rights: The Case of Democratic (Open) Schools' Disciplinary Procedures," *Teaching and Teacher Education* 142, (May 2024). <https://doi.org/10.1016/j.tate.2024.104528>.

²⁷ Nicoleta Duță, "From Theory to Practice: The Barriers to Efficient Communication in Teacher-Student Relationship," *Procedia-Social and Behavioral Sciences* 187, (May 2015): 625-630. <https://doi.org/10.1016/j.sbspro.2015.03.116>.

²⁸ Banu Setyo Adi, et.al., "Teachers' Perspective on Motor Learning with Traditional Game Approach among Early Children," *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 41, no. 1 (2022). <http://dx.doi.org/10.21831/cp.v41i1.36843>.

familiar with traditional games.^{29,30} Meanwhile, the use of traditional games in learning provides two benefits. First, they become an effort to reintroduce traditional games to children living in urban areas.^{31,32,33} Second, they become an effort to bring learning closer to children who are still familiar with games.^{34,35} Thus, efforts to preserve culture can be carried out by adopting noble cultural values as part of learning.^{36,37}

It is very important to note the presence of traditional games as a cultural asset. Traditional games are one of the nation's cultural assets that play an essential role and are closely related to the psychological function of child development. Unfortunately, traditional games are almost abandoned and forgotten because they have been replaced by modern games, such as online games and play station (PS).³⁸ Therefore, traditional games should be developed as a learning method to preserve the nation's culture.³⁹ One of the traditional games developed as a learning method is the engklek game or

²⁹ Sudardiyono Sudardiyono, Hari Yulianto Yulianto, and Yudanto Yudanto, "Traditional Games as a Tools for Increasing Students' Motor Skills and Effort to Preserve The National Culture: Traditional Games as a Tools for Increasing Students' Motor Skills and Effort to Preserve The National Culture," *Community Development Journal* 5, no. 1 (2021): 184–88.

³⁰ T. Kovačević, and S. Opić. "Contribution of Traditional Games to the Quality of Students' Relations and Frequency of Students' Socialization in Primary Education," *Croatian Journal of Education* 16, no. 1 (2014): 95-112. <https://hrcak.srce.hr/117853>.

³¹ Hakan Tüzün et al., "The Effects of Computer Games on Primary School Students' Achievement and Motivation in Geography Learning," *Computers & Education* 52, no. 1 (2009): 68–77.

³² Karen De Coninck et al., "Measuring Student Teachers' Self-Efficacy Beliefs About Family-Teacher Communication: Scale Construction and Validation," *Studies in Educational Evaluation* 64, (March, 2020). <https://doi.org/10.1016/j.stueduc.2019.100820>.

³³ SF. Luthfie Arguby Purnomo et al., "King Size or All Size: Proposing a Typology of Amplication Translation Technique for Children Picturebook Translation," *Studies in English Language and Education* 7, no. 2 (2020). <https://doi.org/10.24815/siele.v7i2.16592>.

³⁴ Ria Ratnawati, Slamet Subiyantoro, and Budi Usodo, "Puppet Art Extracurricular for Education Noble Values of Javanese Culture in Elementary Schools," in *5th International Conference on Arts Language and Culture (ICALC 2020)* (Atlantis Press, 2021), 31–37.

³⁵ I. Lestari and T. Ratnaningsih, "The Effects of Modified Games on the Development of Gross Motor Skill in Preschoolers," *International Journal of Evaluation and Research in Education (IJERE)* 5, no. 3 (2016): 216-220. <https://doi.org/10.11591/ijere.v5i3.4542>.

³⁶ Aypay, "Investigating the Role of Traditional Children's Games in Teaching Ten Universal Values in Turkey," *Eurasian Journal of Educational Research* 62, (2016): 283-300. <http://dx.doi.org/10.14689/ejer.2016.62.14>.

³⁷ Hana Sakura Putu Arga, Faridillah Fahmi Nurfurqon, and Medita Ayu Wulandari, *Permainan Tradisional Dalam Pembelajaran IPS SD (Tre Alea Jacta Pedagogie, 2020)*.

³⁸ Yunxiang Zheng, et.al., "Effects of Digital Game-Based Learning on Students' Digital Etiquette Literacy, Learning Motivations, and Engagement," *Heliyon* 10, no. 1, (January 2024). <https://doi.org/10.1016/j.heliyon.2023.e23490>.

³⁹ Metina Ayu Yunitasari, Lucky Herawati, and Indah Werdiningsih, "Penerapan Permainan Engklek Dan Ceramah Untuk Meningkatkan Pengetahuan Tentang Pemberantasan Sarang Nyamuk Siswa Sekolah Dasar Negeri Krekah, Bantul" (PhD Thesis, Poltekkes Kemenkes Yogyakarta, 2018).

hopscotch.^{40,41,42} The engklek game is played by walking and jumping on one leg. The game is played according to the arrangement by the players. This engklek game is competitive, but there is no penalty for the losers.^{43,44,45}

The engklek game is played outdoors or in the field and can only be played by at least two people and a maximum of six children.⁴⁶ Being played by more than six children is not recommended because the place is limited.⁴⁷ Then a gacuk or lagger is also needed. An initial interview with one of the first graders, Nayla, revealed that she had played engklek with her friends, but when asked how she felt when playing, Nayla said that the game was mediocre and not as interesting as the games on gadgets. At that time, only a few friends wanted to join to play engklek. It indicates that the engklek game is still less attractive to today's children.

It is supported by previous research that some students are still confused with the game path, and there are still students who cheat. However, it has different results when associated with learning media. First, it shows that the student learning achievement using the engklek game is better than before. Second, the engklek game combined with music has also met the criteria suitable for elementary-age children.⁴⁸

⁴⁰ Kiki Maulana and Euis Cici Nurunnisa, "Peningkatan Kemampuan Motorik Kasar Anak Melalui Permainan Tradisional Sunda Manda," *Tarbiyat Al-Aulad: Jurnal Pendidikan Islam Anak Usia Dini* 3, no. 2 (2020).

⁴¹ Maja Videnovik, et.al., "Game-Based Learning Approach in Computer Science in Primary Education: A Systematic Review," *Entertainment Computing* 48, (January 2024). <https://doi.org/10.1016/j.entcom.2023.100616>.

⁴² Yekti Wirani, et.al., "Evaluation of Continued Use on Kahoot! As a Gamification-Based Learning Platform from the Perspective of Indonesia Students," *Procedia Computer Science* 197, (2022): 545-556. <https://doi.org/10.1016/j.procs.2021.12.172>.

⁴³ Chen Sun, et.al., "The Relationship between Collaborative Problem Solving Behaviors and Solution Outcomes in a Game-Based Learning Environment," *Computers in Human Behavior* 128, (March 2022). <https://doi.org/10.1016/j.chb.2021.107120>.

⁴⁴ J. Andrew, et.al., "Analyzing the Factors that Influence Learning Experience through Game Based Learning Using Visual Novel Game for Learning Pancasila" *Procedia Computer Science* 157, (2019): 353-359. <https://doi.org/10.1016/j.procs.2019.08.177>.

⁴⁵ Mela Citra Devana, "Mengembangkan Motorik Kasar Anak Melalui Permainan Tradisional Engklek Di PAUD Nurul Islam Bumi Waras Bandar Lampung" (PhD Thesis, UIN Raden Intan Lampung, 2018).

⁴⁶ Maya Puspita Sari et al., "Pemanfaatan Permainan Tradisional Engklek Sampar Sebagai Media Pembelajaran Matematika Berbasis Etnomatematika," in *SANTIKA: Seminar Nasional Tadris Matematika*, vol. 1, 2021, 447-58.

⁴⁷ Jean Lee Tan, et.al., "Learning Efficacy and User Acceptance of A Game-Based Social Skills Learning Environment," *International Journal of Child-Computer Interaction* 9-10, (December, 2016): 1-19. <https://doi.org/10.1016/j.ijcci.2016.09.001>.

⁴⁸ Eni Irawati and Weppy Susetyo, "Implementasi Undang-Undang Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional Di Blitar," *Jurnal Supremasi*, 2017, 3-3.

Based on the abovementioned research, it can be concluded that the similarity with the author's research is the use of engklek medium in learning as a development model. In terms of differences, the above research focuses more on improving the subjects' learning outcomes or students' psychomotor movements. In contrast, the authors in this study focus on improving students' communication skills that integrate students' cognitive, affective and psychomotor skills in thematic learning.⁴⁹

The researchers intend to develop the engklek game into a learning-based game based on these problems. In this case, the game in the learning is the EFAS game combined with thematic learning with the theme "myself" and subtheme "me and a new first-grade friend". The integrated subjects include Indonesian language, civics, mathematics, cultural arts and crafts, and sports, physical education, and health.

In this case, the EFAS game can also be developed as a medium for conveying character education through games in line with the government's program to implement Strengthening Character Education in elementary schools. In Article of Law No. 20 of 2003 on the National Education System, it is stated that national education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of the nation's intellectual life.⁵⁰

The EFAS medium is expected to assist teachers in delivering materials in class in order to create optimal learning. The EFAS medium is a tool used to facilitate thematic learning, especially for grade 1 in elementary school. In learning, the teacher uses the media to deliver materials and improve students' skills. Therefore, the researchers seek to develop an engaging medium to increase students' enthusiasm for learning in class. It is expected that with the development of this medium, the learning objectives can be achieved to the maximum.

RESEARCH METHODS

This research used the Research and Development (R&D) method. Research and Development (R&D) is a research method used to develop specific products and test the

⁴⁹ Muhammad Shaleh Assingily, et.al., "Pembelajaran Tematik Bagi Anak Usia Dasar (Metodologi dalam Islam)," *Nizhamiyah* 9, no. 2 (2019). <http://dx.doi.org/10.30821/niz.v9i2.548>.

⁵⁰ Michael E. McGrath and Michael N. Romeri, "The R&D Effectiveness Index: A Metric for Product Development Performance," *Journal of Product Innovation Management* 11, no. 3 (1994): 213–20.

effectiveness of these products.⁵¹ Arifin also conveys in her book that research and development is a process or steps to develop a new product or improve an existing one, which can be accounted for. In this research, the product developed is a traditional game named EFAS.⁵²

The research and development of EFAS medium to improve students' communication skills in thematic learning was carried out at IES Al-Ittihadiyah, Berastagi in the 2021/2022 school year. The subjects of this study were 45 students of grade 1 of IES Al-Ittihadiyah Berastagi. The steps in developing this medium were adapted and modified from the steps of Borg and Gall's media development, which included, first, internal validation 1 and 2, second, external validation, third, media finalization, and fourth, the application and finalization of the medium. The flow is as follows:

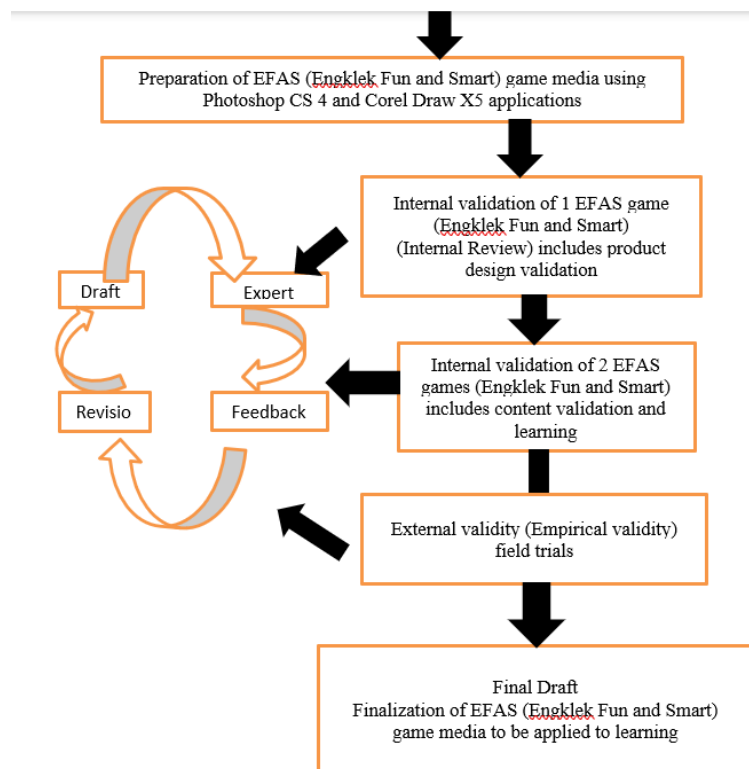


Figure 1
Steps to develop a learning medium based on the traditional game EFAS modified from Borg and Gall
Source : Personal Documents

⁵¹ Zainal Arifin, "Model Penelitian Dan Pengembangan," Bandung: PT Remaja Rosdakarya, 2012. See also J. W. Cresswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 4th edition. Boston, MA: Pearson Education, Inc., 2014.

⁵² Nurdinah Hanifah and J. Julia, *Prosiding Seminar Nasional Pendidikan Dasar Membedah Anatomi Kurikulum 2013 Untuk Membangun Masa Depan Pendidikan Yang Lebih Baik* (UPI Sumedang Press, 2014).

This study used a questionnaire, observation, and test method. The questionnaire method was used to determine the feasibility of the medium. The observation method by looking at the questionnaire responses from students and teachers was used to identify the practicality of the medium. The test method was used to examine the effectiveness of the developed medium in improving students' communication skills. The research population was all 1st-grade students of IES Al-Ittihadiyah Berastagi, which consisted of 45 students. However, this study's sample was only those in class 1 B of IES Al-Ittihadiyah Berastagi, totaling 25 students.

The data obtained were analyzed based on the use of the EFAS (medium to examine students' learning outcomes. This test was conducted for one week, from 11 June to 16 June 2021. The instrument used in this study was an expert validation sheet (media design and learning content). The teacher and students responded to a questionnaire filled out to identify the practicality of the medium and test the learning outcomes from the answers to the description questions provided by the researchers to be answered by the students after using the EFAS medium. It was used to determine the effectiveness of the product. The data analysis used three aspects, including the validity analysis, analysis of the practicality, and analysis of the effectiveness.

Table 1
Validity Score Interval

Score Interval	Category
85.01- 100.00%	Very Valid
70.01 - 85.00 %	Quite Valid
50.01 - 70.00 %	Less Valid
01.00 - 50.00 %	Not Valid

Source :⁵³

Table 2
Product Practicality Criteria

Criteria	Category	Description
75.01% - 100%	Very Practical	Can be used without revisions
50.01% - 75.00%	Practical	Can be used with minor revisions
25.01% - 50.00%	Less Practical	It is not recommended to use
00.00% - 25.00%	Impractical	Unusable

Source :⁵⁴

⁵³ Zainal Arifin, "Model Penelitian Dan Pengembangan," Bandung: PT Remaja Rosdakarya, 2012

⁵⁴ Zainal Arifin, "Model Penelitian Dan Pengembangan," Bandung: PT Remaja Rosdakarya, 2012

RESULTS AND DISCUSSION

This research has succeeded in developing a traditional game-based learning medium named EFAS to improve students' communication skills in thematic learning. Furthermore, the results showed that the learning medium developed was valid, practical, and effective. It was achieved by assessing the validity, practicality, and effectiveness of the learning medium being developed. The three assessments are described as follows.

The EFAS (product was validated to determine the ability to be used and quality of usability in order to create learning media innovations. The validation from experts of media design and learning materials resulted in a "Very Eligible" category for use.

The media design experts gave a validation score of 81.25% for the EFAS product. The aspects assessed by the design experts included the media coloring and guide book cover, EFAS media design, use of words or language, and the feasibility of using EFAS in learning. The design of EFAS medium was similar to the shape of hopscotch in general, but there were additions for jumping stages to make it more varied, such as zigzag, tiptoe, sideways, and balance. The cover of the guide book employed a background of students playing engklek at school. The question cards presented several questions related to learning that could improve the learning outcomes, in terms of the cognitive, affective, and psychomotor aspects.⁵⁵

The result of the validation by experts in learning materials showed that the EFAS product obtained 98.51% score within the "Very Eligible" category. The aspects assessed by the material experts included product presentation, material content, and student involvement. The learning material in the EFAS medium was the material on theme 1, sub-theme 1 comprising myself with Indonesian, mathematics, cultural arts and crafts, sports, physical education, and health, and Pancasila and civic education subjects. The five subjects of the learning material were presented in one medium integrated through question cards and their applications in the form of real games and close to students' real life so that learning is more contextual.⁵⁶

Based on the results of each expert validation, it can be concluded that the overall validity of the EFAS product from two validators was 89.62% and in the "Very Valid" category to be used as a learning medium in Class I elementary school.

⁵⁵ Shilphy A. Octavia, *Model-Model Pembelajaran* (Deepublish, 2020).

⁵⁶ Shilphy A. Octavia, *Model-Model Pembelajaran* (Deepublish, 2020).

The EFAS product was stated as practical through a questionnaire distributed to the respondents, namely 25 students of class I B and the teachers. The students' response to the EFAS product showed a score of 9.6% within the "Very Practical" Category. Meanwhile, the teachers' response was 97.5%.

The questionnaire received good responses from the teachers and students. The use of EFAS medium can improve students' communication skills in learning because EFAS is a medium that requires students to use not only the psychomotor realm but also the affective and cognitive development, and it contains material that is suitable with the learning objectives. In addition, each student can convey from what they have experienced in the stages of playing while learning by using.

The practicality of EFAS medium can be seen from the use of the product by the students and teachers who did not experience any difficulties when using EFAS in learning. The EFAS medium also follows the applicable curriculum because the medium is thematic based, integrating several subjects into one theme. The EFAS medium is said to be practical if students can easily use this product.

The effectiveness of the EFAS product was tested using a test of learning outcomes for 25 respondents. The value obtained from the use of EFAS was 9.2%. It was generated by the students during the learning process using EFAS to deliver the learning material and to change students' learning outcomes. The EFAS medium is said to be effective for learning because it can improve the students' communication skills as the learning outcome.

EFAS is a traditional game modified as learning. The EFAS is a learning medium used to improve the communication skills of grade I students. The EFAS medium includes several subjects, such as Indonesian, mathematics, cultural arts and crafts, sports physical education, and health, and Pancasila and civic education which are summarized in Theme 1 Sub-theme 1 Learning 1 with the EFAS medium subject matter used when the learning process begins as a learning medium in addition to the textbooks used by students.

The EFAS Product (Engklek Fun and Smart) underwent revisions that were adjusted to the ratings, criticisms, and suggestions from experts to make the EFAS product better than before. This EFAS medium is also equipped with a guidebook entitled "Efas-Based Traditional Game Guidebook (Engklek Fun and Smart). Besides the title,

there is material on class 1 theme 1 and the author's name. In the cover section, intending to provide an initial introduction to the game that will be played as a learning medium, students are playing hopscotch in front of a school. Finally, the manual contains information on how to make and use EFAS.

The EFAS product was developed by the researchers as a medium to improve the communication skills of first-grade students in thematic learning. The researchers developed this medium by looking at some media development carried out by previous researchers. For example, Irma Maulidina conducted "Development of the dice engklek game on natural and artificial environment materials in class III social studies subjects at elementary school Muhammadiyah Semarang" in which she developed a traditional engklek dice game that was used as a medium only for social studies learning. Another researcher, Violita, performed "Development of an engklek game model using instrumental music for learning basic jumping motion in class V at elementary school MI Bandar Lampung" where she developed engklek as a learning medium accompanied by instrumental music for the material in sports, physical education, and health with a focus on basic jumping motion for fifth-grade students. Meanwhile, Arum Puspita's "Improving learning outcomes for theme 1 sub-theme 3 using the traditional game method for fourth grade students at elementary school Selomulyo" developed an engklek game to measure the level of learning outcomes of fourth-grade students in thematic learning of Indonesian language material.

Based on these previous studies, it was found that all of the media development used a traditional game named engklek or hopscotch. On this occasion, the researchers tried to develop an EFAS medium by further modifying the common engklek game into an engklek game equipped with ASK and DO boxes as well as giving variations of jumping motion that make EFAS more attractive to students.

The variations of the jumping motion found in EFAS are zigzag, tiptoe, sideways, balance, and finish, and in each engklek box, there is an ASK and DO card. In the learning process using EFAS, the ASK card is a card containing questions to answer directly while playing, with the questions being related to the thematic learning materials for class 1 sub-theme 1 that the researchers have prepared. In contrast, the DO card is a question that requires students to do or practice directly through movement according to the material developed for the learning.

Thus, it can be concluded that the similarity between the learning medium developed by the researchers and those by the previous researchers is the use of the traditional engklek game. Meanwhile, they are different only in the implementation of the development in certain subjects.

CONCLUSION

Based on the description above, it is concluded that the EFAS medium is recognized as valid. The "Very Valid" category reached 89.63% for the EFAS medium. It is also claimed that EFAS is useful as indicated by the result of an opinion survey for the students and teachers. A total of 25 students completed a questionnaire on EFAS, and the questionnaire scored 9.6% in the "Very Practical" category. A score of 97.5% in the "Very Practical" category was awarded for the teacher's response to the supplied statement.

The results of the two questionnaires indicated that the teacher and student replies were categorized as very practical. Third, the EFAS medium was deemed operational. This is demonstrated by the fact that the students were able to respond to the ASK and DO question instruments both in writing and orally with a score of 92% during the learning process using EFAS. From written responses, it can be inferred that EFAS is an "effective" medium, whereas oral responses show that EFAS is a medium that can help students develop their communication abilities. This justifies the declaration that the EFAS medium is valid, applicable, and useful for enhancing students' communication skills.

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DECLARATION OF CONFLICTING INTERESTS

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REFERENCES

- Adi, B. S., Irianto, D. P., & Sukarmin, Y. "Teachers' Perspective on Motor Learning with Traditional Game Approach among Early Children," *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 41, no. 1 (2022). <http://dx.doi.org/10.21831/cp.v41i1.36843>.
- Ananda, P., Melisa, W., & Daffa, F. "Social Effects of Lato-lato Games on Children of SD/MI Age" in *Journal of Contemporary Islamic Primary Education*, vol. 2 no. 1, (2023), 63-68. <https://doi.org/10.61253/jcipe.v1i3.97>.
- Andrew, J., Henry, S., Yudhisthira, A. N., Arifin, Y., & Permai, S. D. "Analyzing the Factors that Influence Learning Experience through Game Based Learning Using Visual Novel Game for Learning Pancasila" *Procedia Computer Science* 157, (2019): 353-359. <https://doi.org/10.1016/j.procs.2019.08.177>.
- Ang, S. C., & Penney, D. "Promoting Social and Emotional Learning Outcomes in Physical Education: Insights from a School-Based Research Project in Singapore" *Asia-Pacific Journal of Health, Sport and Physical Education* 4, no. 3 (2013): 267-286. <https://doi.org/10.1080/18377122.2013.836768>.
- Arga, H. S. P., Nurfurqon, F. F., & Wulandari, M. A. *Permainan Tradisional dalam Pembelajaran IPS SD*. Tre Alea Jacta Pedagogie, 2020.
- Arifin, Z. *Model Penelitian dan Pengembangan*. Bandung: PT Remaja Rosdakarya, 2012.
- Assingkily, M. S., & Barus, U. S. B. "Pembelajaran Tematik Bagi Anak Usia Dasar (Metodologi dalam Islam)," *Nizhamiyah* 9, no. 2 (2019). <http://dx.doi.org/10.30821/niz.v9i2.548>.
- Aypay, A. "Investigating the Role of Traditional Children's Games in Teaching Ten Universal Values in Turkey," *Eurasian Journal of Educational Research* 62, (2016): 283-300. <http://dx.doi.org/10.14689/ejer.2016.62.14>.
- Cabellos, B., Siddiq, F., & Scherer, R. "The Moderating Role of School Facilitating Conditions and Attitudes Towards ICT on Teachers' ICT Use and Emphasis on Developing Students' Digital Skills," *Computers in Human Behavior* 150, (January 2024). <https://doi.org/10.1016/j.chb.2023.107994>.
- Care, E., Griffin, P., & McGaw, B. *Assessment and Teaching of 21st Century Skills*. Springer, 2012.
- Claro, M., Salinas, A., Cabello-Hutt, T., Martin, E. S., Preiss, D. D., Valenzuela, S., & Jara, I. "Teaching in a Digital Environment (TIDE): Defining and Measuring Teachers' Capacity to Develop Students' Digital Information and Communication Skills" *Computers & Education* 121, (2018): 162-174. <https://doi.org/10.1016/j.compedu.2018.03.001>.

- Charles, M. D. A. G., Abdullah, M. R., Musa, R. M., Kosni, N. A., & Maliki, A. B. H. M. "The Effectiveness of Traditional Games Intervention Program in the Improvement of Form One School-Age Children's Motor Skills Related Performance Components," *Journal of Physical Education and Sport* 17, no. 3 (2017): 925-930. <http://dx.doi.org/10.7752/jpes.2017.s3141>.
- Chowdhury, M., Dixon, L. Q., Kuo, L., Donaldson, J. P., Eslami, Z., Viruru, R., & Luo, W. "Digital Game-Based Language Learning for Vocabulary Development" *Computers & Education Open* 6, (June 2024). <https://doi.org/10.1016/j.caeo.2024.100160>.
- Coninck, K. D., Walker, J., Dotger, B., & Vanderlinde, R. "Measuring Student Teachers' Self-Efficacy Beliefs About Family-Teacher Communication: Scale Construction and Validation," *Studies in Educational Evaluation* 64, (March, 2020). <https://doi.org/10.1016/j.stueduc.2019.100820>.
- Cresswell, J. W. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 4th edition. Boston, MA: Pearson Education, Inc., 2014.
- Devana, M. C. "Mengembangkan Motorik Kasar Anak Melalui Permainan Tradisional Engklek di PAUD Nurul Islam Bumi Waras Bandar Lampung" *PhD Thesis*, UIN Raden Intan Lampung, 2018.
- Duță, N. "From Theory to Practice: The Barriers to Efficient Communication in Teacher-Student Relationship," *Procedia-Social and Behavioral Sciences* 187, (May 2015): 625-630. <https://doi.org/10.1016/j.sbspro.2015.03.116>.
- Furió, D., González-Gancedo, S., Juan, M. C., Seguí, I., & Rando, N. "Evaluation of Learning Outcomes Using an Educational iPhone Game vs. Traditional Game," *Computers and Education* 64, (May 2013): 1-23. <https://doi.org/10.1016/j.compedu.2012.12.001>.
- Hanaysha, J. R., Shriedeh, F. B., & In'airat, M. "Impact of Classroom Environment, Teacher Competency, Information and Communication Technology Resources, and University Facilities on Student Engagement and Academic Performance," *International Journal of Information Management Data Insight* 3, no. 2 (2023). <https://doi.org/10.1016/j.jjime.2023.100188>.
- Hanifah, N., & Julia, J. *Prosiding Seminar Nasional Pendidikan Dasar Membedah Anatomi Kurikulum 2013 Untuk Membangun Masa Depan Pendidikan Yang Lebih Baik*. UPI Sumedang Press, 2014.
- Huizinga, T., Lohuis, A., Zwerver-Bergman, J., & Meer, R. V. D. "Student and Teacher Perceptions of Community of Inquiry in Hybrid Virtual Classrooms," *Heliyon* 8, no. 12 (December 2022). <https://doi.org/10.1016/j.heliyon.2022.e12549>.
- Irawati, E., & Susetyo, W. "Implementasi Undang-Undang Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional di Blitar." *Jurnal Supremasi*, 2017, 3-3.
- Irmansyah, J., Lumintuarso, R., Sugiyanto, F., & Sukoco, P. "Children's Social Skills Through Traditional Sport Games in Primary Schools" *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 39, no. 1 (2020). <http://dx.doi.org/10.21831/cp.v39i1.28210>.

- Istiqlal, M. "Pengembangan Multimedia Interaktif dalam Pembelajaran Matematika." *JIPMat* 2, no. 1 (2017). <https://doi.org/10.26877/jipmat.v2i1.1480>.
- Khobir, A. "Upaya Mendidik Anak Melalui Permainan Edukatif" *Forum Tarbiyah*, 7:197–208. Fakultas Tarbiyah IAIN Pekalongan, 2009. <https://doi.org/10.28918/jei.v4i1.1043>.
- Kovačević, T., & Opić, S. "Contribution of Traditional Games to the Quality of Students' Relations and Frequency of Students' Socialization in Primary Education," *Croatian Journal of Education* 16, no. 1 (2014): 95-112. <https://hrcak.srce.hr/117853>.
- Lestari, I., & Ratnaningsih, T. "The Effects of Modified Games on the Development of Gross Motor Skill in Preschoolers," *International Journal of Evaluation and Research in Education (IJERE)* 5, no. 3 (2016): 216-220. <https://doi.org/10.11591/ijere.v5i3.4542>.
- Lester, J. C., Spires, H. A., Nietfeld, J. L., Minogue, J., Mott, B. W., & Lobene, E. V. "Designing Game-Based Learning Environments for Elementary Science Education: A Narrative-Centered Learning Perspective," *Information Sciences* 264, (April 2014): 4-18. <https://doi.org/10.1016/j.ins.2013.09.005>.
- Li, P., Mayer, D., & Malmberg, L. "Student Engagement and Teacher Emotions in Student-Teacher Dyads: The Role of Teacher Involvement," *Learning and Instruction* 91, (June 2024). <https://doi.org/10.1016/j.learninstruc.2024.101876>.
- Ma, T., Tellegen, C. L., & Sanders, M. R. "The Role of Parenting Self-Efficacy on Teacher-Child Relationships and Parent-Teacher Communication: Evidence from an Australian National Longitudinal Study," *Journal of School Psychology* 103, (April, 2024). <https://doi.org/10.1016/j.jsp.2024.101296>.
- Majid, N. W. A., & Ridwan, T. "Development of the Traditional Digital Games for Strengthening Childhood's Verbal Skill" *Jurnal Pendidikan Vokasi* 9, no. 1 (2019): 75–82. <http://dx.doi.org/10.21831/jpv.v9i1.22802>.
- Maulana, K., & Nurunnisa, E. C. "Peningkatan Kemampuan Motorik Kasar Anak Melalui Permainan Tradisional Sunda Manda" *Tarbiyat Al-Aulad: Jurnal Pendidikan Islam Anak Usia Dini* 3, no. 2 (2020). <https://riset-iaid.net/index.php/TA/article/view/411>.
- McGrath, Michael E., and Michael N. Romeri. "The R&D Effectiveness Index: A Metric for Product Development Performance." *Journal of Product Innovation Management* 11, no. 3 (1994): 213–20. [https://doi.org/10.1016/0737-6782\(94\)90004-3](https://doi.org/10.1016/0737-6782(94)90004-3).
- Octavia, S. A. *Model-Model Pembelajaran*. Deepublish, 2020.
- OthmanOthman, A., & RuslanRuslan, N. "Intercultural Communication Experiences among Students and Teachers: Implication to in-Service Teacher Professional Development," *Journal of Multicultural Education* 14, no. 3-4 (September 2020): 223-238. <https://doi.org/10.1108/JME-04-2020-0024>.
- Pattison-Meek, J. "The Unsung Heroes of Practicum Mentorship: Moving Toward a Triad Model Inclusive of Student Voice to Support Student Teachers' Professional

- Learning" *Teaching and Teacher Education* 143, (June 2024). <https://doi.org/10.1016/j.tate.2024.104553>.
- Peng, Y. "The New Teaching Requirements and the Influence of Assessment: A Case Study of College English Reform in China" *PhD Thesis*, University of Huddersfield, 2011. <https://eprints.hud.ac.uk/id/eprint/14052/>.
- Purnomo, S. L. A., Untari, L., Purnama, S. L. S., Asiyah, N., Muttaqien, M. Z., Umam, R. K., Sartika, Y., Pujiyanti, U., & Nurjanah, H. "King Size or All Size: Proposing a Typology of Amplification Translation Technique for Children Picturebook Translation," *Studies in English Language and Education* 7, no. 2 (2020). <https://doi.org/10.24815/siele.v7i2.16592>.
- Putro, K. Z., Assingkiy, M. S., Febiyanto, A., & Dahlan, Z. "Clown Children: Quo Vadis Guarantee for Children with Special Needs in the Era of Covid-19," *Al-Ishlah: Jurnal Pendidikan* 13, no. 2 (2021). <https://doi.org/10.35445/alishlah.v13i2.761>.
- Ratnawati, R., Subiyantoro, S., & Usodo, B. "Puppet Art Extracurricular for Education Noble Values of Javanese Culture in Elementary Schools" *5th International Conference on Arts Language and Culture (ICALC 2020)*, 31–37. Atlantis Press, 2021. <https://www.atlantis-press.com/proceedings/icalc-20/125953359>.
- Sangcharoon, T. "Reading and Writing Skills Development: The Use of SQ5R Technique" *PhD Thesis*, Prince of Songkla University, 2010. <https://kb.psu.ac.th/psukb/bitstream/2010/7834/1/326067.pdf>.
- Sari, M. P., Kautsar, F., Maulana, A., Lorensa, F., Putri, D. R. B., Dzawisiadah, L., & Sari, N. H. M. "Pemanfaatan Permainan Tradisional Engklek Sampar Sebagai Media Pembelajaran Matematika Berbasis Etnomatematika" *SANTIKA: Seminar Nasional Tadris Matematika*, 1:447–58, 2021. <https://proceeding.uingusdur.ac.id/index.php/santika/article/view/368>.
- Siddiq, F., Scherer, R., & Tondeur, J. "Teachers' Emphasis on Developing Students' Digital Information and Communication Skills (TEDDICS): A New Construct in 21st Century Education," *Computers & Education* 92-93, (January-February 2016): 1-14. <https://doi.org/10.1016/j.compedu.2015.10.006>.
- Sudardiyono, S., Yulianto, H. Y., & Yudanto, Y. "Traditional Games as a Tools for Increasing Students' Motor Skills and Effort to Preserve The National Culture: Traditional Games as a Tools for Increasing Students' Motor Skills and Effort to Preserve The National Culture." *Community Development Journal* 5, no. 1 (2021): 184–88. <https://doi.org/10.33086/cdj.v5i1.1914>.
- Suherman, W. S., Dapan, D., Guntur, G., & Muktiani, N. R. "Development of a Traditional Children Game Based Instructional Model to Optimize Kindergarteners' Fundamental Motor Skill," *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan* 38, no. 2 (2019). <http://dx.doi.org/10.21831/cp.v38i2.25289>.
- Sun, C., Shute, V. J., Stewart, A. E. B., Beck-White, Q., Reinhardt, C. R., Zhou, G., Duran, N., & D'Mello, S. K. "The Relationship between Collaborative Problem Solving Behaviors and Solution Outcomes in a Game-Based Learning Environment," *Computers in Human Behavior* 128, (March 2022). <https://doi.org/10.1016/j.chb.2021.107120>.

- Tan, J. L., Goh, D. H., Ang, R. P., & Huan, V. S. "Learning Efficacy and User Acceptance of A Game-Based Social Skills Learning Environment," *International Journal of Child-Computer Interaction* 9-10, (December, 2016): 1-19. <https://doi.org/10.1016/j.ijcci.2016.09.001>.
- Tüzün, H., Yılmaz-Soylu, M., Karakuş, T., Inal, Y., & Kızılkaya, G. "The Effects of Computer Games on Primary School Students' Achievement and Motivation in Geography Learning" *Computers & Education* 52, no. 1 (2009): 68–77. <https://doi.org/10.1016/j.compedu.2008.06.008>.
- Videnovik, M., Bogdanova, A. M., & Trajkovik, V. "Game-Based Learning Approach in Computer Science in Primary Education: A Systematic Review," *Entertainment Computing* 48, (January 2024). <https://doi.org/10.1016/j.entcom.2023.100616>.
- Wirani, Y., Nabarian, T., & Romadhon, M. S. "Evaluation of Continued Use on Kahoot! As a Gamification-Based Learning Platform from the Perspective of Indonesia Students," *Procedia Computer Science* 197, (2022): 545-556. <https://doi.org/10.1016/j.procs.2021.12.172>.
- Wulanyani, N. M. S., Pratama, Y. S., Swastika, K., Sudarmaja, I. M., Wandra, T., Yoshida, T., Budke, C. M., & Ito, A. "A Preliminary Study to Access the Use of a "Snakes and Ladders" Board Game in Improving the Knowledge of Elementary School Children About Taeniasis" *Acta Tropica* 199, (2019). <https://doi.org/10.1016/j.actatropica.2019.105117>.
- Yunitasari, M. A., Herawati, L., & Werdiningsih, I. "Penerapan Permainan Engklek dan Ceramah Untuk Meningkatkan Pengetahuan tentang Pemberantasan Sarang Nyamuk Siswa Sekolah Dasar Negeri Krekah, Bantul" *PhD Thesis*, Poltekkes Kemenkes Yogyakarta, 2018.
- Zak-Doron, I., & Perry-Hazan, L. "Teachers' Roles in Facilitating, Delimiting, and Balancing Student Participation Rights: The Case of Democratic (Open) Schools' Disciplinary Procedures," *Teaching and Teacher Education* 142, (May 2024). <https://doi.org/10.1016/j.tate.2024.104528>.
- Zheng, Y., Zhang, J., Li, Y., Wu, X., Ding, R., Luo, X., Liu, P., & Huang, J. "Effects of Digital Game-Based Learning on Students' Digital Etiquette Literacy, Learning Motivations, and Engagement," *Heliyon* 10, no. 1, (January 2024). <https://doi.org/10.1016/j.heliyon.2023.e23490>.

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