DEVELOPMENT OF PUKIF (CREATIVE PUZZLE) LEARNING MEDIA FOR MADRASAH IBTIDAIYYAH STUDENTS

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Abstract
The development of PUKIF (Creative Puzle) learning media for Madrasah Ibtidaiyyah students can significantly improve learning outcomes and student engagement. However, it is still little developed for civic education learning in madrasah Ibtidaiyyah. . This study aims to develop the design and test the feasibility of PUKIF (Creative Puzzle) learning media. This research involved 29 students of class II-D MIN 1 Kota Kediri for the trial. This type of research and development in this study is using Research and Development (R&D) with the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate). The instruments in this study are interviews, observations, documentation, questionnaires for material and media expert assessments, and student response questionnaires. The results showed that (1) the validation results of 2 media experts showed that the learning media was suitable for use in the learning process with an average score of 3.8 and 3.8 from the score range of $3.25 \leq \bar{x} \leq 4.00$, While the results of the operational field trial show that the learning media is feasible to use in the learning process with an average score of 1.93, the score range is $1 < \bar{x} \leq 2$. For further research, researchers should compare the effectiveness of PUKIF with other existing learning media, such as flashcards, educational games, or other interactive learning methods

Keywords: *Devolepment, Creative Puzzle, Media*

Introduction

Learning media is the media used in learning, which includes teacher aids in teaching and means of carrying messages from learning sources to recipients of learning messages (students). (Heri Hidayat, 2020). The learning process involves interaction between learners and educators. In addition, media and other learning resources are also needed in the learning process in order to give a good impression in obtaining knowledge obtained by students. The interactions involved between learners and educators in the learning process can take place independently, in a small or large study group environment (Nafi'an, 2023; Afifah, 2023). According to Arsyad Azhar (2013), media is as all forms of intermediaries used by humans to convey or

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spread ideas, ideas, or opinions so that the ideas, ideas, or opinions expressed reach the recipient properly. According to Hasnul and Ade (2018), there are 4 objectives of using learning media, namely; (1) Make it easier for students to understand certain concepts, principles, attitudes, and skills; (2) Provide different and varied learning experiences so as to stimulate students' interest in learning; (3) Foster certain skill attitudes in technology; (4) Create learning situations that cannot be easily forgotten by students. Learning media has several functions, namely as a means that can provide visual experiences to students, among others, to encourage learning motivation, clarify and simplify complex and abstract concepts to be simpler, concrete, and easy to understand (Nurdiyansyah, 2019).

In relation to learning media, researchers conducted observations and there are problems that exist in MIN 1 Kediri City, namely the lack of innovation in the development of learning media due to constraints and limited time and resources. Available learning media tend to be existing media such as globe, term, poster, LCD, and others. In the learning process, students need their motivation and interest in understanding the material, because it can affect the environment, situation and conditions during the teaching and learning process. Therefore, educators need to use learning media to foster their motivation and interest in learning. According to Adela and Valentine (2015) explained that the influence of media is getting bigger on all young people, especially on elementary school age students. In this case, learning media also functions as a means of self-development, both from the side of students and educators.

In choosing learning media, of course, it is not arbitrary or just made to meet learning needs, but must be adjusted to the objectives and other factors for the effectiveness of the learning process. However, educators must be able to master various types of media that will be used and applied when teaching in class. According to Cecep and Bambang (2016) educators must pay attention to media selection criteria, namely; (1) In accordance with the objectives to be achieved; (2) Appropriate to support the content of lessons that are facts, concepts, principles, or generalisations; (3) Practical, flexible, and enduring; (4) Teachers are skilled in using it; (5) Target grouping; (6) Technical quality. By developing learning media specifically designed for grade II students, creative puzzle media is an educational game that is specially made and can develop aspects of children's creativity development (Mildarulia, 2021).

Based on the above problems, researchers will develop learning media in the form of creative puzzles. In the learning process that uses media as developing thinking skills, of course, requires a concentration and proper observation for students. Puzzle learning media is one of the media that introduces image media in the form of pieces with creations made. Puzzle image media is a game media that makes it easy for children to gradually develop their ability to solve problems, and to know the

appropriate places to play and teach children to act carefully (Sunarti and Ambo, 2017). Puzzle learning media has its appeal when used in learning because it is a form of learning aid to challenge children's thinking and creativity in trying to solve problems.

Creative puzzles are developed according to material that can be used by educators in learning, especially Pancasila and Citizenship Education subjects. Creative puzzles can be used to introduce the practice of the Pancasila precepts so that students can indirectly understand the material with this media (Lulu, 2022). According to Nola, et al (2020), there are three benefits of puzzle learning media, namely; (1) Train creativity, order and concentration levels; (2) Generate motivation to always try to solve problems; (3) Improve cognitive abilities. Primary grade students need a level of development of thinking skills. In addition to the development of affective and psychomotor aspects, the development of cognitive aspects is also the basis for improving thinking skills. Educators can invite learning while playing so that students find new things to be creative and find new ideas or experiences. Creative puzzle media development is one form of media development that is designed to be interesting and innovative that can be used in the learning process. An effective learning process is to adjust the needs of teachers and students so that the learning process is not boring and students are actively involved in learning.

According to Molina (2020), et al, explained that educators need to bridge the gap between what educators teach and what students learn, educators need to collect data during lessons about student learning. Learning takes place by applying thematic learning which has currently been established by the Ministry of Education. Each thematic learning theme consists of subthemes and lessons. Each lesson presents two or three subject matters. In class II theme 1, subtheme 1, lesson 2, there is material on Pancasila and civic education. Civic education is one of the fields of study that carries out the national mission to educate the life of the Indonesian nation through the corridor of value-based education (Sa'adun, et al, 2017). Pancasila and civic education is a learning subject that provides national insight for students. Academically, civic education is an educational programme that serves to foster awareness of citizens in exercising their rights and obligations in accordance with the prevailing constitutional values (Suparlan, 2016).

Creative puzzles can be used to introduce the practice of the Pancasila precepts so that students can indirectly understand the material with this media (Lulu, 2022). In this case, researchers will develop puzzle learning media in the subject of Pancasila and Citizenship Education. According to the Curriculum Centre (in Ahmad Jamalong, et al), learning Pancasila and civics education has functions and objectives to provide competencies, namely; (1) Think critically, rationally and creatively in responding to civic issues; (2) Participate in quality and responsibility, and act intelligently in social, national and state activities; (3) Develop positively and democratically to shape themselves based on the character of Indonesian society in

order to live together with other nations; (4) Interact with other nations in world affairs directly or indirectly by utilising information and communication technology. Pancasila and Citizenship Education has an important role in providing concrete knowledge starting from the elementary school level until the end of life. Pancasila as the basis of the philosophy of the nation and state of Indonesia is essentially sourced from cultural and religious values owned by the Indonesian people as the nation's personality. (Ani, 2017).

In this case, not only educators, but families and other layers of society can work together in strengthening positive values in the younger generation in order to form a character based on Pancasila and the 1945 Constitution. With the existence of Pancasila, life that grows as a value will be interrelated with the values of good life. The values of Pancasila need to be implemented in the life of society, nation and state. This is important because it reflects the personality of the Indonesian people who have values and morals as citizens who obey and love the country. The values contained in the precepts of Pancasila are absolute things that already exist.

METHODS

This type of research and development on creative puzzle learning media uses Research and Development (R&D). The model that will be used to conduct research and development is the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate). According to Robert (2009) ADDIE is an acronym for Analyze, Design, Develop, Implement, and Evaluate. ADDIE is a product development paradigm and not a model per se.

The development procedures in this study are (1) Analyze, namely needs analysis, curriculum analysis, analysis of learner characteristics, (2) Design, namely determining the type of media with learning content, compiling a media development draft and making a basic media framework to suit the characteristics of learners, (3) Develop, namely structuring media and materials, Make media, make media expert validation instruments, material experts and learner responses, and carry out validation (4) Implement, namely the implementation of implementation is carried out by preparing lesson plans (RPP), preparing a learning environment by involving students, implementation (5) Evaluate, namely assessing the instructional quality of products and processes, before and after implementation.

The trials carried out were the main field trial (small group) involving 14 students and the operational field trial (large group) involving all 29 students. While the types of data obtained in this media research and development are qualitative data in the form of interviews, observations, documentation and comments and suggestions for improving learning media from material experts and media experts, and quantitative data in the form of assessment scores from material experts, media experts and student response questionnaires. Quantitative data is obtained from the

results of calculating the average score of each aspect of the assessment both from material experts, media experts and student response questionnaires. From these results it will be known whether the learning media that has been developed is feasible or not.

According to Sudijono (2006), the results of the assessment of the validation and the learner response questionnaire will be the average score obtained. and calculated by the following formula: Average percentage = (Score obtained)/(Number of instruments). In distributing questionnaires, it is necessary to determine an assessment scale that needs to be interpreted qualitatively, namely, very feasible, feasible, inappropriate, and very inappropriate. According to Sugiyono (2006), the Likert scale used in making variables can use four levels. In addition, interpretation in quantitative form with scoring from 1-4 for the feasibility category of the analysis results from media experts and material experts, while interpretation in quantitative form with scoring from 1-2 for the feasibility category of student responses. From the percentage obtained, the feasibility of learning media can be determined by calculating the average score and looking at the learning media feasibility criteria (Widiyoko, 2012).

Table 1. Score Range for Material Experts and Media Experts

Nilai	Rentang Skor	Kategori	Konversi
4	$3,25 \leq \overline{x} \leq 4,00$	Sangat Baik	Layak
3	$2,5 \leq \overline{x} < 3,25$	Baik	
2	$1,75 \leq \overline{x} < 2,5$	Tidak Baik	Tidak Layak
1	$1 \leq \overline{x} < 1,75$	Sangat Tidak Baik	

Table 2. Score Range for Learner Response

Nilai	Rentang Skor	Kategori	Konversi
2	$1 < \overline{x} \leq 2$	Setuju	Layak
1	$0 < \overline{x} \leq 1$	Tidak Setuju	Tidak Layak

RESULTS AND DISCUSSION

The development of PUKIF learning media (Creative Puzzle in the subject of Pancasila and Citizenship Education at MIN 1 Kediri City is carried out in accordance with the stages of the ADDIE model (Analyze, Design, Develop, Implement, Evaluate). The results are as follows:

Figure 1 instructions for using the media
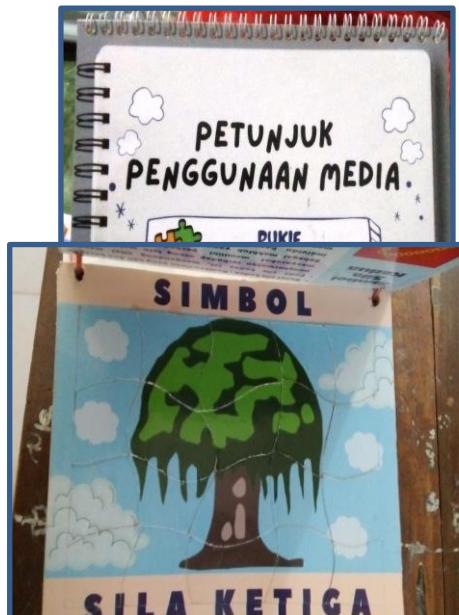
Figur 2. Pukif

Figure 3, Pukif

Figure 4, Implementation in class

       Analyze, which includes needs analysis, curriculum analysis, and analysis of learner characteristics; Design, which includes determining the type of media with

learning content, compiling a media development draft, and making a basic media framework that fits the characteristics of learners; Develop, which includes structuring media and materials; making media, making media expert validation instruments; material experts and learner responses; and Conclude, which includes analyzing, including needs analysis, curriculum analysis, Evaluate, namely assessing the instructional quality of products and processes, before and after implementation.

1. **Analyse**

Researchers conducted an analysis of needs analysis, curriculum analysis, learner analysis). Interview is the collection of information by asking a number of questions orally to be answered orally (Margono, 2005). Based on interviews that have been conducted with the II-D homeroom teacher, that learning media is also needed by educators who can be adjusted to the material being taught.

The existence of constraints such as time, methods, limitations make educators less innovative in developing learning media. Researchers focus more on thematic class II, theme 1, subtheme 1, learning 2 on learning Pancasila and Citizenship Education material on the practice of the precepts of Pancasila. The curriculum used at MIN 1 Kediri City is the 2013 curriculum. The character of students who are happy with new experiences in learning makes educators demand fun learning for students.

2. **Design**

Researchers can conduct documentation studies for the design stage. Documentation study or often called documentation is a data collection technique by collecting and analysing documents related to research purposes, both in the form of written documents, images and electronics (Sukmadinata, 2005). Researchers design media designs that have been associated with Pancasila and Citizenship Education subjects, namely creative puzzle media. Researchers also draft the necessary media, minimise the obstacles that may occur, create a storyboard or basic framework of creative puzzle media.

3. **Develop**

Develop or product development, can be done by producing creative puzzle learning media and validating the media. Researchers made arrangements in creative puzzle media both in terms of media and material and made instructions for using the media. After the media has been developed, the researcher makes a validation instrument to be validated by media experts (1 lecturer and 1 teacher), material experts (1 lecturer and 1 teacher), and makes a student response questionnaire.

4. **Implement**

Implementation is carried out by preparing the learning environment by involving students. Before carrying out implementation activities with this creative puzzle media, researchers can condition students and prepare lesson plans so that they can follow the learning well. Implementation was carried out at MIN 1 Kediri City with 29

students in class II-D. The trial phase will be carried out in the form of a small group involving 14 students and a large group trial with 29 students. This stage is carried out to determine whether or not creative puzzle media is feasible in media development in the learning content of Pancasila and Citizenship Education on the material of practicing the precepts of Pancasila.

5. Evaluate

The final stage is evaluation by assessing the instructional quality of products and processes, before and after implementation. Researchers reviewed some input and suggestions from experts and the results of student responses. The results of validation and trials state that PUKIF (Creative Puzzle) learning media are suitable for use in the learning process. The assessment of the media expert validator, material expert, learner response questionnaire is as follows:

Table 3. Media Expert Validation Results

No	Ahli Media	Kriteria	Rata-rata
1.	Ahli Media 1	Layak	3,8
2.	Ahli Media 2	Layak	3,8

The assessment of media experts related to the display aspects of the PUKIF (Creative Puzzle) learning media development is intended to determine whether or not revisions are needed with these assessment guidelines. Media expert 1 who is in charge of assessing the research and development of this learning media is an Arabic Language Education lecturer by teaching learning media courses. The results of the overall assessment of the media expert validator 1 with a total score of 134 in the feasibility category stated very well with the score results from the score range $3.25 \leq \bar{x} \leq 4.00$. From the conversion results, it can be stated that PUKIF learning media from the overall assessment of the content aspects and learning aspects are "feasible" with an average score of 3.8. Media expert validator 2 in charge of assessing the research and development of this learning media is the teacher of class II-D at MIN 1 Kediri City. The results of the overall assessment of the media expert validator 2 with a total score of 134 in the feasibility category stated very well with the results of the score from the score range $3.25 \leq \bar{x} \leq 4.00$. From the conversion results it can be stated that the PUKIF learning media from the overall assessment of the content aspects and learning aspects are "Worthy" with a total score of 3.8.

In this case, it is in accordance with the results of the feasibility of PUKU (Cube Puzzle) learning media proposed by Ernawan (2017), that the feasibility of PUKU (Cube Puzzle) media from the media expert assessment gets a score of 123 in the feasibility category stating very good from the score range $3.25 \leq \bar{x} \leq 4.00$ and feasible with an average score of 3.61.

Table 4. Validation Results from Material Experts

No	Ahli Materi	Kriteria	Rata-rata
1.	Ahli Materi 1	Layak	3,7
2.	Ahli Materi 2	Layak	3,5

The assessment of material experts related to the content and learning aspects of the PUKIF (Creative Puzzle) learning media development is intended to determine whether or not revisions are needed with these assessment guidelines. Material expert validator 1 who is in charge of assessing the research and development of this learning media is a Madrasah Ibtidaiyah Teacher Education lecturer by teaching PPKN SD / MI learning courses. The results of the overall assessment of the material expert validator 1 with a total score of 37 in the feasibility category stated very well with the results of the score from the score range $3.25 \leq \bar{x} \leq 4.00$. From the conversion results, it can be stated that PUKIF learning media from the overall assessment of the content aspects and learning aspects are "feasible" with a total score of 3.7. Material expert validator 2 in charge of assessing the research and development of this learning media is one of the class teachers at MIN 1 Kediri City. The results of the overall assessment of the material expert validator 2 with a total score of 35 in the feasibility category stated very well with the results of the score from the score range $3.25 \leq \bar{x} \leq 4.00$. From the conversion results it can be stated that the PUKIF learning media from the overall assessment of the content aspects and learning aspects are "feasible" with an average score of 3.5.

In this case, it is in accordance with the results of the feasibility of PUKU (Cube Puzzle) learning media proposed by Ernawan (2017), that the feasibility of PUKU (Cube Puzzle) media from the material expert assessment gets a total score of 40 in the feasibility category stating very good from the score range $3.25 \leq \bar{x} \leq 4.00$ and feasible with an average score of 4.00.

Table 5. Learner Response Results

No	Uji Coba Lapangan	Kriteria	Rata-rata
1.	Uji Coba Awal (Kelompok Kecil)	Layak	1,97
2.	Uji Coba Operasional (Kelompok Besar)	Layak	1,93

The results of the overall assessment of learner responses in the initial field trial in small groups with a total score of 276 and in the feasibility category stated that they agreed with the score results from the score range $1 < \bar{x} \leq 2$. From the conversion results it can be stated that PUKIF learning media from the overall assessment of the content aspects, appearance aspects and learning aspects are "feasible" with an average score of 1.97. The results of the overall assessment of students' responses to the operational trial in large groups with a total score of 562 and in the feasibility category stated that they agreed with the results of the score from the score range $1 <$

ˉx ≤ 2. From the conversion results it can be stated that the PUKIF learning media from the overall assessment of the content aspects, appearance aspects and learning aspects are "Feasible" with an average score of 1.93.

In this case, it is in accordance with the results of the feasibility of PUKU (Cube Puzzle) learning media proposed by Ernawan (2017), that the feasibility of PUKU (Cube Puzzle) media from the results of the initial field trial received a score of 147 with an average score of 1.84 and in the operational field trial received a score of 469 with an average score of 1.87 in the feasibility category stating that it is very good and feasible from the score range $1 < ˉx ≤ 2$.

Analysis/Discussion

The assessment results from media expert validator 1 show a total score of 134, which is in the very good feasibility category with an average score of 3.8, based on a score range of $3.25 ≤ ˉx ≤ 4.00$. Media expert validator 2 gave the same assessment, with a total score of 134 and an average of 3.8, also in the very good category, while the PUKIF learning media material expert from the overall assessment of the content aspects and learning aspects was feasible with an average score of 3.5. Based on these results, PUKIF learning media is declared feasible to use in terms of content and learning aspects. Overall, the assessment of media experts in this study shows that PUKIF is a learning media that is very feasible and effective for use in Madrasah Ibtidaiyyah. Support from the literature, as stated by Nafi'an (2023), Afifah (2023), Nusrdiansyah (2019), Heri Hidayat (2018), and Arsyad (2018), further strengthens the findings that interactive and creative learning media can have a significant positive impact on the student learning process.

Conclusions

The results of the development of PUKIF (creative puzzle) learning media in the subject of Pancasila Civics Education at MIN 1 Kediri City have been produced and are feasible to use with the process of research and development (R&D) stages using the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate). Based on the results of the validation of material experts, media experts, initial and operational field trials, the results of the student response questionnaire PUKIF learning media declared feasible and valid for use in learning media in the learning process. For further research, researchers should compare the effectiveness of PUKIF with other existing learning media, such as flashcards, educational games, or other interactive learning methods.

References

Afifah, D. S. N., Nafi'an, M. I., & Manggar, D. A. (2023). The Development of Adobe Flash CS6-Based Interactive Media to Improve Numerical Literacy Skills for Madrasah Ibtidaiyah Students. *Kreano, Jurnal Matematika Kreatif-Inovatif, 14*(1), 75-85

Akbar, S., A'yun, I. Q., Satriyani, F. Y., Widodo, W., Paranimmita S.K, R., & Ferisa, D. (2017). *Implementasi Pembelajaran Tematik di Sekolah Dasar*. Bandung: Remaja Rosdakarya.

Al Hakim, S., Soegiarto, L. M., Suparlan, Astawa, K. D., Untari, S., & Hady, N. (2016). *Pendidikan Kewarganegaraan dalam Konteks Indonesia*. Malang: Madani.

Alzanah, L., & Happy I. D. (2022). Pengembangan Puzzle Kreatif untuk Media Pembelajaran Anak Sekolah Dasar. *Jurnal Ikraith Humaniora, 6*(2).

Azhar, A. (2013). *Media Pembelajaran*. Jakarta: Rajagrafindo Persada.

Bradea, A., & Blandul, V. C. (2015). The Impact of Mass-media upon Personality Development of Pupils from Primary School. *Procedia - Social and Behavioral Sciences, 205.*

Ernawan. (2017). Skripsi. *Pengembangan Alat Permainan Edukatif PUKU (Puzzle Kubus) sebagai Pengenalan Pancasila dan Nilai-Nilainya pada Mata Pelajaran Pendidikan Kewarganegaraan Kelas II-B SD Negeri Deresan Caturtunggal Depok Sleman.* Yogyakarta: UNY.

Fikri, H., & Madona, A. S. (2018). *Pengembangan Media Pembelajaran Berbasis Multimedia Interaktif*. Yogyakarta: Samudra Biru.

Girsang, M. Br., & Roni H. (2021). Desain Permainan 3D Puzzle dengan Bentuk Hewan Khas Kalimantan. *Jurnal Kreatif: Desain Produk Industri dan Arsitektur, 9*(1).

Hidayat, H., & Mulyani, H. (2020). Peranan Teknologi dan Media Pembelajaran bagi Siswa Sekolah Dasar di dalam Pembelajaran Pendidikan Kewarganegaraan. *Jurnal Pendidikan Kewarganegaraan Undiksha, 8*(2).

Kustandi, C., & Sutjipto, B. (2016). *Media Pembelajaran Manual dan Digital*. Bogor: Ghalia Indonesia.

Margono. (2005). *Metodologi Penelitian Pendidikan*. Jakarta: Rineka Cipta.

Molina, E., Fatima, S. F., Ho, A. D., Melo, C., Wilichowski, T. M., & Pushparatnam, A. (2020). Measuring the Quality of Teaching Practices in Primary Schools: Assessing the Validity of the Teach Observation Tool in Punjab, Pakistan. *Teaching and Teacher Education, 96.*

Nafi'an, M. I. (2023). DEVELOPMENT OF NUMERACY LITERACY MODULE ON MEASUREMENT MATERIAL IN ISLAMIC ELEMENTARY SCHOOL. *JP2M (Jurnal Pendidikan dan Pembelajaran Matematika), 9*(1), 12-19.

Nari, N., Akmay, Y., & Sasmita, D. (2020). Penerapan Permainan Puzzle untuk Meningkatkan Kemampuan Membilang. *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi, 7*(1).

Nurdiyansyah. (2019). *Media Pembelajaran Inovatif*. Sidoarjo: UMSIDA Press.

Rahayu, A. S. (2017). *Pendidikan Pancasila & Kewarganegaran (PPKn)*. Jakarta: Bumi Aksara.

Sudijono. (2006). *Pengantar Statistik Pendidikan*. Jakarta: Rajagrafindo Persada.

Sugiyono. (2016). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

Sukmadinata. (2005). *Metode Penelitian* Pendidikan. Bandung: Remaja Rosdakarya