Abstract
Teacher competence in teaching and learning process is needed to appropriately deliver learning content so that students and teachers can achieve learning objectives. Teachers experienced obstacles in implementing dance learning in SBdP subject in elementary schools based on interviews and documentation studies. This research aims to develop a puzzle as an instructional medium to assist teachers in overcoming obstacles to the implementation of dance learning. The puzzle development is an effort to assist teachers in overcoming the problems encountered. The puzzle designed by the researchers was combined with the make a match concept (make a pair) so that learning was not only fun, but students could deepen their understanding of the material to be delivered. This study used a design-based research method (DBR) with the Reeves (2006) model. The research began with problem identification, developing a solution prototype, carrying out an iterative process in product testing, and reflection. The product can be used optimally by adjusting the indicators for the development of instructional medium. Researchers obtained suggestions and improvements to the product developed through the validity test phase done by the validator. Based on the validity test results done by the validator and the trial to students, the puzzle design was align with the needs of instructional media and the characteristics of students. Trials to students were carried out twice with positive responses to the use of instructional media. Thus, a decent final product could be produced, namely, puzzle as an instructional medium which was based on make a match concept to help overcome obstacles to the implementation of dance learning in SBdP subject in elementary schools.

Keywords: teacher competence; SBdP learning; traditional creative dance; learning media; make-a-match puzzles.

INTRODUCTION
Learning in elementary schools contains various subjects, one of which is the subject of Cultural Arts and Crafts (SBdP) by containing one of the fields of art, namely the art of dance. Learning Arts, Culture and Crafts (SBdP) in the 2013 curriculum emphasizes the development of students' creativity.

Based on the syllabus of Ministry of Education and Culture 2016 the SBdP subject, the learning aims to provide an
experience of how beauty can be formed in students in the form of activities of expression and achievement. As a result, learning is expected to help students in shaping the personality of students who are good and have intelligence so that they can develop their talents and creativity according to their interests and potential.

In the 2013 curriculum, there are three aspects of strengthening that are contained, namely aspects of attitudes, aspects of knowledge and aspects of skills. In order to achieve the development of these three aspects, Core Competencies (KI) and Basic Competencies (KD) in each subject, one of which is in the SBdP subjects in the field of dance for class IV SD 2013 curriculum, namely:

| KI 3 | understand factual knowledge by observing and asking questions based on curiosity about himself, God's creatures and their activities, and objects they encounter at home, at school and at the playground. |
| KD 3.3 | know the movements of regional creation dance |
| KI 4 | present factual knowledge in clear, systematic and logical language, in aesthetic works, in movements that reflect healthy children, and in actions that reflect the behavior of children with faith and noble character |
| KD 4.3 | Demonstrating a traditional creation dance |

To achieve these competencies, teachers as educators have a role to understand a concept to educate students in activities related to art. In fact, classroom teachers who play a role in teaching dance to students generally do not understand the context of dance in the realm of education(Giyartini, 2020). Besides that, Sustiawati et al. (2018) found the fact that the school, teachers, students and parents of students lacked knowledge about the concept and purpose of dance in education so that it tends to make learning less creative.

In addition, based on the researcher's search, class teachers lack the ability in the field of dance and the media used is less varied so they cannot explore all the potential of students to the fullest. This is in line with the statement Giyartini (2020) that there is a scarcity of learning media that can be used by teachers who do not have a scientific basis for dance education but must teach dance. The use of learning media in art subjects can help support the understanding of the subject matter by students (Wahyun et al., 2020).

Based on these two things, the existence of learning media is needed to assist teachers in explaining the meaning of dance learning so that all the potential possessed by students can be channeled properly. As referring to the opinion Falla & Mintohari (2019) the existence of media in the learning process is very important because the media can involve students directly, independently and can unite a perception. Therefore, one of the media that can be used in learning dance in elementary school is a puzzle game.

The Big Indonesian Dictionary defines puzzles as picture pieces in the form of pairs and then will be arranged by the child to become a complete form using their knowledge and skills. Puzzles can be used by teachers in learning by making it as a solution in fostering student interest in learning in the classroom. With puzzle media, students not only learn but learn while playing. Puzzles are appropriate to be used as learning media because they can liven up a fun learning atmosphere (Falla & Mintohari, 2019).

Puzzle media can increase students' learning motivation because in the learning process there is an increase in enthusiastic student interest in learning. Learning to use puzzle media can increase interest, cognitive skills, fine motor skills by practicing patience, and a sense of pleasure when finding alternative problem solving in the cultural arts learning process (Kasmiatun, 2020).

Previous research on puzzles has been carried out by Giyartini (2020), the puzzle concept used is a dance puzzle whose pieces are filled with illustrations of certain dance images. The puzzle concept designed can be used to introduce cultural diversity by using traditional dances from various tribes in Indonesia. In this study, puzzles were not just about disassembling the pieces of a picture,
but children were taught to appreciate it by understanding the content of the picture and capturing the basic movements of a dance.

Different from the puzzle concept in previous studies, researchers developed learning media from puzzle games. Researchers designed puzzles by combining the make a match learning model (make a pair) with puzzle games, which can be used as puzzle game innovations to be used as learning media.

METHOD

The research method that the researcher uses is Design Based Research (DBR), which is a methodology designed by and for educators with an effort to increase the impact, transfer, and translation of educational research into better practice. (Anderson & Shattuck, 2012).

The concept of design-based research is used as the basis for carrying out research because it has the aim of providing solutions to the obstacles experienced by teachers in learning dance, the solution is in the form of developing learning media in learning dance in elementary schools. This is in accordance with the development of the DBR method, namely designing, developing, and testing a product to solve problems in learning (Mulyati et al., 2019).

Researchers used four stages in the Reeves Model, 2006 (in Lidinillah, 2012) as the stages of research implementation are as follows:

- Identifikasi Masalah
- Pengembangan prototype
- Uji Coba dan Implementasi
- Refleksi untuk mendapatkan design principle

Figure 1. Reeves (2006) model

In this study, the researcher intends to develop a puzzle game combined with the concept of make a match to serve as a medium for learning the art of dance in the subjects of Cultural Arts and Crafts (SBdP) in elementary schools. The media is then validated by experts, tested in the field directly, evaluated, and revised if there are deficiencies, so that finally the media is suitable for use in the learning process.

The validation test was carried out by pedagogic experts, namely teachers, learning media experts and dance material experts in elementary schools. While the research subjects in this study were 16 fourth grade students at SDN Dukuhdalem and 4 children aged 10-11 years who lived in the researcher's home environment.

RESULTS AND DISCUSSION

1. Description of the Results of Problem Identification and Analysis by Researchers and Practitioners Collaboratively

   Lack of knowledge about the concepts and objectives of dance education affects the learning program which causes the implementation of learning to be less creative. Dance learning tends to be carried out by imitating movements that have been formed so that sometimes it does not give meaning and is not in accordance with the level of development of students (Sustiawati et al., 2018). In line with that Giyartini (2020) mentions that teachers tend to carry out learning by providing rote motion so that children lack space to develop their creative potential.

   The results of interviews conducted by researchers with fourth grade elementary school teachers showed that the dance lessons had not yet reached the stage of developing the potential of students. The teacher explained that he lacked competence in the field of dance so that the learning was carried out in a modest manner. Dance learning tends to be carried out by utilizing dance videos available on YouTube media and assistance from teachers who are competent in their fields.

   Therefore, based on the results of the study of documentation and interviews, the researchers found the fact that teachers had obstacles in carrying out dance lessons according to the characteristics of students. In addition, class teachers lack the scientific basis for dance education but must teach dance in elementary schools.

   Researchers found the lack of availability of media that can be used to facilitate learning in the arts, especially...
dance also affects the learning process. This is due to the lack of competence of teachers in this field. So the teacher hopes that there will be innovations in learning media that can help the learning process, especially dance learning.

2. Description of Results Developing Prototype Solutions Based on Benchmark Theory, Existing Design Principles and Technological Innovation

At this stage, researchers develop based on relevant theories and support researchers in designing product designs to be developed, so that the resulting media can help make it easier for teachers to convey learning to students. The media developed is also strived to be in accordance with the development of students and the scope of dance in elementary schools.

The product that will be developed to overcome the problems found by the researchers is a puzzle media combined with a make a match model. Make a match developed by Lorna Curran (1994) in Nurdyansyah & Fahyuni (2016) is one type of method used in cooperative learning.

The concept of make a match is usually used to help students understand the material. In addition, the concept is used as a method used to make learning more fun (Falla & Mintohari, 2019). The advantage of using this method is that students are in a fun learning atmosphere when they understand the concept by looking for a partner (Nurdyansyah & Fahyuni, 2016).

Researchers designed puzzle media for grade IV elementary school by considering the ease and availability of materials needed in making the product.

The product is presented in the form of a medium-sized puzzle made of cardboard with a square frame. The puzzle piece consists of nine pieces with a square cutting technique. For the puzzle display, sourced from students' and teachers' books in the form of pictures, questions, and answers related to regionally created dance materials to then be printed using sticker paper. Make a match-based puzzles have three parts, namely the puzzle frame, the answer board/holding board, and the question puzzle pieces.

![Initial design of the puzzle frame](image1)

Figure 2. Initial design of the puzzle frame

The puzzle frame is designed to measure 21 cm x 21 cm with a width of 1.5 cm x 1.5 cm on all four sides. The frame consists of 3 layers of cardboard board and coated with mica plastic in the first layer as a barrier. The first layer is used for mounting the answer board, the second layer is for installing the puzzle pieces, and the third layer is used for the answer board (previously used for the answer board).

![answer board](image2)

Figure 3. answer board

The answer board/retaining board has two functions, namely the first side as the answer board while the plain second side is used as the retaining board after the puzzle pieces have been completed.
Figure 4. Two sides of a puzzle

The puzzle pieces have two different sides, the first side contains questions related to regional dances in Indonesia and the second side is a piece of a complete dance image. The pieces are paired with the answers on the answer board. So the product designed by the researcher is not a puzzle made up of pieces of the picture, but a pair of questions and answers.

3. Undertaking Iterative Processes to Practically Test and Improve Solutions

Before conducting product trials, researchers first conduct consultations and product feasibility tests to experts who are competent in their fields. Researchers conducted product feasibility tests on learning media experts, dance material experts in elementary schools, and pedagogic experts, namely teachers. The feasibility test indicators are adjusted to the needs of media procurement and the characteristics of elementary school students.

The existence of consultations and feasibility tests to experts aims to get suggestions and improvements to the products developed, thus the product can achieve feasibility so that it can be used by teachers and students in the learning process. Based on the results of product validation from the three experts, the product is feasible to use for learning in elementary schools.

At the consultation stage, the researcher received a revision in the question formulation section on the puzzle pieces and the answer board. Previously, the questions and answers that were arranged were the same in the five puzzles. In accordance with the advice of material experts, there were changes to the questions and namely the pieces of the questions on the puzzle and the answers varied according to the characteristics of the illustrations of the regional dance images displayed. If the main picture of the puzzle is the peacock dance, the questions and answers that are paired are about the characteristics of the peacock dance, as well as the other puzzles.

Researchers can carry out product trials in elementary schools after validating and improving products. Researchers conducted trials twice. The trial was carried out to find out the weaknesses and shortcomings of the product when it was used in the learning process in the classroom. In addition, to find out the comparison of the first trial, so that it can strengthen the results of the trial.

The first trial was carried out on fourth grade students accompanied by a class teacher and the second trial was conducted on children aged 10-11 years in the researcher's home environment. In practice, learning can be carried out well and enthusiastically. Parties related to product trials gave a positive response to the learning media used.

4. Reflection to Generate Design Principles and Improve Practical Implementation of Solutions

Researchers make improvements and product trials after a product feasibility test is carried out. Based on the stages of the research carried out, a suitable final product was produced, namely puzzle media based on make a match in the SBdP Learning about regional creation dance. The product contains material on regionally created dances that refer to KI, KD, and art learning objectives in the 2013 curriculum.
The Final Product of the Development of Media Puzzle based on Make a Match

1. Three Part Puzzle

Figure 5. Three Part Puzzle

Puzzles consists of three parts, namely the frame, answer board/cover board, and puzzle pieces.

2. Puzzle Frame

Figure 6. Puzzle Frame

The puzzle frame is a square with a size of 21 cm x 21 cm. Consists of 3 layers of 0.2 cm cardboard board covered with mica plastic in the middle to protect the puzzle pieces so that when the puzzle is turned over, the puzzle pieces do not fall.

3. Answer Board/Cover Board

Figure 7. Answer Board/Closing Board

The board in Figure 3 has two functions, namely as an answer board and a retaining board. On the side of the answer board displays nine answers to the questions on the puzzle pieces.

4. Puzzle Pieces

Figure 8. Puzzle Pieces

There are nine puzzle pieces measuring 6.5 cm x 6.5 cm with two different sides. The first side is a question that will be paired with the answers on the answer board. While the second side is a piece of a complete regional creation dance image. The questions and answers in the puzzle are adjusted to the characteristics of the regional dances that are displayed.

5. Puzzle Final View

Figure 9. Final View of the Puzzle

The final display of the puzzle is a complete picture of a dance from five different regions in Indonesia. The picture will be fully structured if students can pair the questions and answers correctly and not complete if the paired questions and answers are incorrect. Here are the dance names of the four puzzles:

1. Hudoq Dance (East Kalimantan)
2. Serimpi Dance (Yogyakarta)
3. Peacock Dance (West Java)
4. Pakarena Fan Dance (South Sulawesi)
5. Bungong Jeumpa Dance (Aceh)

How to use Media Puzzle based on Make a match in SBdP Learning about Regional Creative Dance

1. Students are divided into five groups according to the number of puzzles.
2. The previous puzzle pieces are first removed from the frame and shuffled.
3. Group representatives come forward to select the puzzle answer frame and board.
4. The teacher distributes dance material texts and puzzle pieces according to the colors on the "Answer Board" text on the frame.
5. Students are assigned to match pieces of questions with answers. Emphasize to students not to arrange the pieces of the picture.
6. After students have finished putting together the puzzle, the puzzle is brought to the front of the class to be collected.
7. When all groups have finished putting together the puzzle, the teacher can show the main pictures one by one by moving the answer board to the back and making it a cover for the back frame.
8. If the puzzle pieces form a complete picture, the students have paired the questions and answers correctly, and vice versa.
9. After showing the main picture, the teacher can explain again each of the characteristics of the regional dance in the puzzle and demonstrate one of the dance moves.

CONCLUSION

Based on the results of research and development of make a match-based puzzle media in SBdP learning about regional creation dances in elementary schools, the following conclusions can be drawn:
1. Teachers experience obstacles in the implementation of dance learning in SbdP subjects in elementary schools, these obstacles are experienced due to the lack of procurement of dance learning media that can be used by teachers with less competence in the field of dance but must teach dance. The development of puzzle games can be used as a solution to make it easier for teachers to carry out dance learning.
2. Learning media products in the form of puzzles combined with the concept of make a match are an effort to make a product that makes it easier for teachers to convey learning and can be easily understood by students.
3. The feasibility of the product is carried out with a validation test by the validator, there are three experts who carry out the validation test, namely learning media experts, material experts and pedagogic experts. As a result, the product is feasible to use for learning in elementary schools. In addition to the validation test, product trials were carried out on students directly and trials on children of the same age as the students who did the trial in the first stage.
4. The final product produced to overcome the problems experienced by teachers in learning dance in elementary schools is a make a match-based puzzle media in SBdP learning about regionally created dance materials. The product can help teachers to present regionally created dance materials that refer to KI, KD, and art learning objectives in the 2013 curriculum.

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