

Development Thematic Learning Instrument Based of Creative Games to Developing Multiple Intelligence

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Abstract: Development Thematic Learning Instrument Based of Creative Games to Developing Multiple Intelligence. Educational services provided in class 1 of primary school should be able to meet the learning needs of students with all the uniqueness and diversity of potential intelligence, learning styles, cultural diversity and daily patterns of children's lives. Therefore, the teacher's ability to adjust the learning services provided with the learning needs of students in class 1 is needed. The most appropriate education services that are in accordance with the stage of development of children at this age are through play activities-based thematic learning to develop the multiple Intelligence of students in accordance with the variety of cultures and daily patterns of children's lives. For the learning process to take place effectively, it needs to be supported by relevant learning tools. The purpose of this development research is to produce thematic learning tools based on creative games to develop plural intelligence. The development of the learning device uses the development path of the Borg and Gall model with 8 steps: (1) conducting preliminary research to gather information, (2) planning, (3) developing initial product types / forms, (4) conducting field trials the initial stage in the school, (5) conducting a major product revision, (6) conducting a follow-up / main field trial, (7) conducting a revision of operational products, (8) disseminating and implementing the product. Learning tools developed consist of: Thematic learning manual based on creative games, Syllabus, lesson plan and Enrichment Books that have fulfilled the criteria of validity, effectiveness and practicality.

Keywords: learning devices, creative games, multiple intelligence

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I. Introduction

Levels Primary school is the first formal school level taken by students who become the initial institutions of children doing schooling activities. Educational services for primary school level must be able to pay attention to the diversity of cultures, religions, natural conditions, and patterns of daily life of children. To minimize learning failure, it must be adjusted between the teaching style of the teacher and the learning style of the students. Adjustment of learning needs is something that is absolutely done as a form of recognition of the diversity and intelligence possessed by each individual student. Educational services provided should be able to meet the learning needs of students with all the uniqueness and diversity of potential intelligence, learning styles, cultural diversity and daily patterns of children.

Educational services that are most appropriate to the stage of development of children in primary school age are through game-based thematic learning to develop the intelligence potential of students in accordance with the variety of cultures and daily patterns of children's lives. Thematic learning must combine authentic events, emphasizing student involvement and linking concepts from several subjects with themes as a binder so ideally the existing thematic learning instrument should pay attention to this.

Learning instrument carried out by teachers in the form of thematic activities that include playing activities in order to improve plural intelligence are also still very limited. The implementation of learning in class 1 in general is still unfavorable for the development of child fragility, especially plural intelligence which has not been integrated in the learning tools developed by the teacher through play activities. This is evident in the learning activities that still look mechanistic and one-way with a very lacking approach to play. The limited understanding of the theories and concepts of thematic learning based on creative games to improve the multiple intelligences possessed by teachers is one of the factors causing the lack of effective learning. In addition, the availability of creative game-based learning instrument that can improve multiple intelligence that is still lacking is also the cause of the weak teaching and learning process.

Creative play activities developed and presented in thematic learning are intended to develop optimally the potential of intelligence possessed by each student. In essence all children have the potential for intelligence and talent. The challenge is how to design play activities that are able to optimize the intelligence potential of each student. It is emphasized by (Armstrong, 2006) that every child has nine intelligences, only the level is different and each child has the ability in each field.

Multiple intelligence is a theory of intelligence that suggests that every human being has nine different spectrums of intelligence and uses them in very individual ways. Everyone can develop all intelligence to reach an adequate level, and each intelligence works together with each other in a complex way because in each intelligence there are various ways to grow one aspect. Plural intelligence is an assessment that looks descriptively at how individuals use their intelligence to solve problems and produce something (Gardner, 1999). according to the observations of researchers, learning in elementary schools, especially in grade 1 in general is still ongoing is not conducive to the development of the potential of multiple intelligences possessed by students. The pattern of educational services presented for grade 1 children in elementary school is not yet in accordance with the stage of its development and has not optimally developed the potential for plural intelligence possessed by students.

For grade 1 students in primary school, the education service that is considered the most appropriate for stimulating the development of multiple intelligence is through thematic learning based on creative games. Through the game it is believed to be able to develop all the intelligence potential possessed by students optimally. Therefore, it is very important for the development of valid, practical, and effective thematic learning based on creative games that are applied in the learning process to foster the plurality of intelligence possessed by students.

II. Methods

This research uses Research and Development (R & D) methods. This research is not reviewing or formulating theories, but rather producing an effective product for schooling. The products that will be produced in this study are thematic learning tools based on creative games. This product is reviewed through field research in the form of action research as a reflection of researchers, to accurately know the product is useful.

The development of creative game thematic learning based on primary schools in Somba Opu District, Gowa Regency, while product trials were carried out in several primary schools in Gowa Regency. The initial testing activities carried out at the Pacinongang Primary School in Somba Opu Subdistrict and Tetebatu I Primary School, Pallangga sub district. Whereas the main field trials were conducted in 5 schools, namely: Pacinongang Primary School, Tetebatu I Primary School, Pa'bangiang Primary School, Mangasa Primary School and Al Fityan School Gowa Integrated Islamic Primary School.

The stages of R & D research activities generally consist of the stages of needs analysis, design (prototype 1), development (research), and testing. In the analysis of the needs of the data obtained in the form of initial observations in grade 1 elementary school. In addition, pre-research was also conducted by observing learning in grade 1 of primary school. Then the next stage is making a design (prototype I) whose main instrument is the researcher himself in developing the design. The results of the initial hypothetical in the form of prototype I were then validated by experts / experts as many as two people and one practitioner, so that at this stage the results of the assessment of experts / experts and practitioner who became the instrument of his research. Finally, in the testing phase the research instruments were teacher questionnaires and student learning outcomes.

III. Result & Discussions

The first step taken to obtain information is to conduct preliminary research to obtain initial information while getting an overview of creative game learning instrument for the development of multiple intelligence. This preliminary research phase was conducted to get an overview of the application of creative games to develop the multiple intelligences that have been used so far. Findings regarding the learning process that have not been optimal and have not centered on students recommend to develop creative game-based learning instrument to develop multiple intelligence.

In procedure learning in primary school consists of initial activities, core activities, and final activities. These three activities constitute a whole and sequential unity in forming abilities that are expected to be mastered by students. The results of the teacher task analysis then found that the learning process can be divided into five parts that must be considered by the teacher, namely the initial part is divided into pre-opening and initial learning activities, then core activities, and the final activities are divided into two, the final activities and follow-up activities . The analysis of students in grade 1 primary school with the developmental stage is still in the concrete operational stage which still requires real experience through play activities to become the foundation for the development of the creative game.

In developing creative games for multiple intelligence, it is also necessary to pay attention to cohesiveness that provides a meaningful experience to students. Integration can be in the form of integration of concepts between subject competencies or cross subjects so that students can understand the concepts learned through direct experience and relate them to other concepts that have also been understood. Thematic learning goes from a certain theme as a binder or center of attention then used to understand the symptoms and other concepts, both derived from the competencies of the subjects concerned as well as from other subjects. Integrated learning is a learning-oriented approach that is suitable for the developmental needs of students.

The implementation of integrated learning departs from a topic or theme chosen and developed by the teacher together with students. The aim of this theme is not only to master subject concepts, but concepts from related subjects serve as tools and vehicles to study and explore these topics or themes. The use of integrated learning places students as subjects of learning / student-centered.

The learning process can be directed so that students carry out creativity activities that are appropriate to their level of development, for example solving problems through play activities. Thematic learning is a learning strategy to provide meaningful experiences to students by involving several subjects. The priority of thematic learning is the creation of friendly, fun and meaningful learning. Through thematic learning, students are taught learning competencies flexibly and there is no separation of subjects. Thematic learning can provide benefits to students, among others, developing the talents and interests of students, fostering the creativity of students, social skills, learning can last long, and foster problem solving skills.

The development of creative learning materials that can be used by students and teachers to achieve the completeness of the basic competencies of the subjects that have been translated into indicators of subjects that are themed to be taught in each of the lessons learned. This form of learning by using creative games that have been designed requires teachers to always be creative in thinking and acting so that the teacher always presents and facilitates play activities that can stimulate the interests and motivations of students while developing the multiple intelligence they have. The situation is safe, comfortable and pleasant and meaningful must be presented by the teacher in carrying out this creative play activity so that learning can run effectively and be able to complete the competencies to be achieved. Learning instrument for creative games developed include thematic learning manuals, syllabus, lesson plans and learning media. The learning device developed has been validated by experts declared valid with a reliability value of more than 0.75 so that it meets the elements of validity and reliability.

The analysis of the practicality of learning devices is done by implementing learning by observing the teacher in managing defense activities:

aspect	Observer 1								total	av er ag e	Observer 2								total	averag e		
	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8				
Preliminary activities (pre-opening and opening)																						
Aspect averang e	2	2	2	2	2	2	2	2	2	16	2	2	2	2	2	2	2	2	2	16	2	
core activities																						
Aspect averang e	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2			
Closing activities																						
Aspect averang e	2	2	2	2	2	2	2	2	2	2,0	2	2	2	2	2	2	2	2	2	2	2,0	2,0
Total averang e	2	2	2	2	2	2	2	2	2	2,0	2	2	2	2	2	2	2	2	2	2	2,0	2,0

The implementation of learning devices is obtained by the category that the learning device is implemented entirely in the category $1.5 \leq M \leq 2$ with the number of agreement of two observers is 44 and the diagram is 0. This means that two observers agree that the management of thematic learning based on creative games for intelligence plural is implemented with percentage of agreement (R) = 100% with the implementation of learning in the category fully implemented.

The effectiveness of learning devices is obtained from the level of development of student learning outcomes of at least 70% of students achieving the level of development of learning developed according to

expectations and the teacher gave a positive statement to each aspect that was responded to in each component of the learning device at least 80% of the total teacher responses. The following is the analysis of the effectiveness of the development of student learning outcomes.

Aspects of the Development of Multiple Intelligences	Average school 1 (SDN Pacinongang Unggulan)	Average school 2 (SDI Tetebatu I)	Average school 3 (SDI Pa'bangiang)	Average school 4 (SDI Mangasa)	Average school 5 (SDIT Al Fityan)
Linguistics	99,58	95,85	75,00	100	84,38
Math logic	99,58	92,92	85,71	99,46	83,04
Kinesthetic / physical	99,58	99,58	92,86	100	85,71
Visual Spatial	99,58	92,50	81,70	100	89,73
Musical	98,75	95,83	81,70	100	75,89
Intrapersonal	99,58	95,83	79,02	100	80,36
Interpersonal	99,58	97,50	87,05	100	87,05
Naturalist	98,75	96,25	96,88	100	85,71
Spiritual	97,08	94,17	85,71	100	93,30
Total average	99,12	95,60	85,07	99,94	85,02

The average overall aspects of the development of multiple intelligence in schools where the main trial was 92.95 with achievements exceeding 75% of students achieving the level of development of their learning outcomes developed according to expectations for aspects of multiple intelligence. In this main trial activity, this creative game based thematic learning instrument is very effective in developing multiple intelligence.

For the results of the questionnaire / teacher response to the learning devices that have been developed, the following results are obtained.

No	Aspects that are responded to	Rating							
		Very good		good		poor		Not good	
		total	%	total	%	total	%	total	%
1.	Handbook	35	66 %	18	34 %	-	-	-	-
2.	Lesson plan	34	64 %	19	36 %	-	-	-	-
3.	syllabus	34	64 %	19	36 %	-	-	-	-
4.	Enrichment Book	30	57 %	23	43 %	-	-	-	-

The results of the development of learning devices are in very good and good categories with achievements for handbook the multiple intelligence, namely 66% or as many as 35 teachers giving very good responses and 34% or as many as 18 teachers giving good responses. For Lesson plan 64% or as many as 34 teachers gave very good responses and 36% or 19 teachers gave good responses. For the syllabus obtained 64% or as many as 34 teachers gave very good responses and 36% or as many as 19 teachers gave good responses. Whereas for enrichment books obtained 57% or as many as 30 teachers gave very good responses and 43% or as many as 23 teachers gave good responses. The results obtained based on the table above that each component of a creative game-based thematic learning instrument to develop multiple intelligences is obtained by presentation $\geq 80\%$, reaching 100%. It can be said that thematic learning instrument based on creative games to develop multiple intelligence if viewed from the results of teacher responses are very effective with 100% achievement.

The results of the initial field trials in two schools and the main field trials in 5 schools also showed an increase in learning outcomes. Taking the results of observations using the instruments for implementing learning and observing the development of learning by using learning instrument that have been developed shows very good results. The average results of the implementation of learning devices for the achievement of learning outcomes have exceeded the achievement of the level of development of student learning outcomes which amounted to at least 70% of students, the results obtained at 92, 95. These results indicate that learning devices developed are very effective for developing multiple intelligence. In addition, the results obtained based on the teacher's response questionnaire that the learning device developed was declared very effective with 100% achievement.

Researchers have special findings that can be input and suggestions for improving learning in the early grades, especially grade 1 primary school, these findings include:

- a. The preliminary activity is an activity that is the starting point for the success of learning, therefore, attractive design activities must be carried out in this segment to help create a conducive learning atmosphere. This preliminary activity can begin with pre-opening activities and opening activities.
- b. Creative play activities can foster multiple intelligence and enthusiasm for learning students. The thing that must be done by the teacher in carrying out this learning activity is the ability to do variations and proper improvisation to attract children's interest and foster the enthusiasm of learning. This is important because class 1 is still a transition from pre-operational to concrete operations so that teaching skills are needed to suit the learning needs of these students.

- c. Variations in learning should not only be done in the classroom but must also be designed to utilize the school environment as a place of learning. For learning outside the classroom, the teacher must have more careful preparation and creative learning design so that activities outside the classroom can be effective.

IV. Conclusion

The conclusions from this research and development are as follows:

1. The thematic learning instrument based on creative games to develop the multiple intelligence of grade 1 students in primary schools in Gowa Regency is declared valid. This is in accordance with the results of the validator which is in the range of valid and very valid categories.
2. Based on the results of the testing of thematic learning instrument based on creative games to develop the multiple intelligence of grade 1 students of primary schools in Gowa Regency it is stated practical to use. The results of the implementation of the learning device were obtained by the category that the implementation of this learning device was fully implemented.
3. The results of the analysis of effectiveness by referring to the achievement of the learning outcomes or multiple intelligence of students and the teacher's positive response indicate that the thematic learning instrument based on creative play to develop the multiple intelligence of grade 1 primary school students in Gowa Regency are very effective in developing multiple intelligence and get a very positive response.
4. Research and development of thematic learning instrument based on creative games to develop multiple intelligences using the Borg and Gall model with developmental steps, namely: (1) conducting preliminary research (pre-survey), (2) planning, (3) developing types / initial product form, (3) conducting initial field trials in two schools, (5) major product revisions, (6) conducting major field trials in five schools, (7) revising operational products, and (8) disseminating.

References

- [1]. Armstrong, T. (2006). *Awekening Your Child's Natural Genius*. Batam: Kharisma Publishing.
- [2]. Anitah, S. (2011). *Strategi Pembelajaran di Sekolah Dasar*. Jakarta: Universitas Terbuka.
- [3]. Collin, G. d. (1991). *Integrated learning:Planned Curriculum Unit*. Illinois: IRI/Skylight Publishing.
- [4]. Cordova, F. M., M, H. D., Cifuentesa, F., Cañete, L., & Palominos, F. (2015). Identifying Problem Solving Strategies for Learning styles in Enggining Students Subjected to Intellegince tes EEG and Monitoring. *Prodia Computer Science* (55), 18-27
- [5]. Dostal, J. (2015). Theory of Problem Solving. *Procedia of Social and Behavior Science*, 18(174), 2798-2805.
- [6]. Fogarty, R. (1991). *The Mindful School:How to Integrated the Curricula*. Illinois: Skylight Publishing,Inc.
- [7]. Gardner, H. (1999). *Intelligence reframed: Multiple Intelligences for 21 th Century*. USA: BasicBooks.
- [8]. Gok, T. (2010). The General Assesment of Problem Solving Processes and Metacognition in Physics Education. *Eurasian Journal of Physics and Chemistry Education*, II(2), 110-112.
- [9]. Hedge, B., & Meera, B. (2012). How do They Solve it? An Insight into Learner's Practice Approach to Mechanism of Physics Problem Solving. *American Physical Society, Physical Review Special Topics - Physics Education Research*, I(8), 0101091-010109.
- [10]. Kemendikbud. (2016). *Panduan Pembelajaran Tematik Terpadu SD*. Jakarta: Kementrian Pendidikan dan Kebudayaan.
- [11]. M.Hosnan. (2014). *Pendekatan Scientifik dan Kontekstual dalam pembelajaran abad 21*. Jakarta: Ghalia Indonesia.
- [12]. Musfiroh, T. (2010). *Pengembangan Kecerdasan Majemuk*. Jakarta: Universitas Terbuka.
- [13]. Partin, R. L. (2012). *Kiat Nyaman Mengajar di Dalam Kelas*. Jakarta: Indeks.
- [14]. Rojas. (2012). Enhancing the Process of Teaching and Learning Physics via Dynamic Problem Solving Strategies: A Proposal. *Revista Mexicana de Fisica*(58), 7-17.
- [15]. Suyanto. (2013). *Menjadi Guru Profesional*. Jakarta: Erlangga.
- [16]. Yaumi, D. M. (2012). *Pembelajaran Berbasis Multiple Intelligences*. Jakarta: Dian Rakyat.
- [17]. Yeni Rachmawati, E. K. (2010). *Strategi Pengembangan Kreativitas pada Anak*. Jakarta: Prenada Media Group.
- [18]. Yuliani Nurani Sujiono, B. S. (2010). *Bermain Kreatif Berbasis Kecerdasan Jamak*. Jakarta: PT. Indeks.

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