



Development of Quizz-Based Creative Thinking Skill Assessment in Thematic Learning of Elementary School Class V Students

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ABSTRACT: This research and development aims to develop Quizz-based assessment instruments of creative thinking skills. This study applies the type of development research using the ADDIE model (Analysis Design-Develop-Implement-Evaluate). The Quizz-based creative thinking skills assessment instrument was tested on a limited scale with 15 students from 3 different schools (SDN 1 Pasir Gintung, SDN 1 Kota Baru, and SDN 2 Kampung Baru). The improved instrument was tested on a large scale in 3 schools (SDN 1 Pasir Gintung, SDN 1 Kota Baru, and SDN 2 Kampung Baru). Data collection techniques using non-test in the form of questionnaires and interviews. Data analysis in this research is descriptive qualitative and quantitative analysis. (1) Qualitative descriptive analysis techniques are used to analyze data from experts and user validation results. (2) Quantitative descriptive techniques are used to analyze the data obtained from the questionnaire scores. The results of this study indicate that research on the development of Quizz-based creative thinking skills assessment instruments in thematic learning of fifth grade elementary school students is declared valid (suitable for use), the instrument questions are categorized as sensitive and practical.

KEYWORDS: Assessment Instrument, Creative Thinking skills, Elementary School, Quizz, Thematic.

INTRODUCTION

Assessment of students is the most important part in learning. Achievement of learning objectives that educators need to provide an assessment to students. Appraisal which is conducted by educators use assessment instruments, because the assessment instrument is an initial portrait when inequality occurs in the world of education. Assessment instruments if done properly will form increased learning output, namely assessments that involve students (Dian & Nawang, 2020).

This is in accordance with the opinion Putra (2013) that Assessment activities require a series of processes and procedures, so that the value of each student is born as a result of their learning. Assessment requires appropriate assessment tools are generally better known as instruments. The narrowing of the meaning of the assessment has become a separate problem in the world of education. A new paradigm is needed in assessment so that assessment is an activity that is included in the learning process so that assessment activities can assist in improving the quality of learning.

Trilling & Fadel (2009) States that "The Partnership for 21st Century Skills stated that "To succeed in the 21st century, all students will need to perform to high standards and acquire mastery of rigorous core subject themes. All students will also face the complex challenges of our age".

This means that students in the 21st century need to have high standards of competence and mastery of themes in depth to face the complex challenges of the times. Steps that can be taken to create adaptive graduates are developing skills through the habituation of the learning process. Thinking skills are very important in the learning process, so that students have the ability to solve problems in everyday life, as Jean Piaget has argued (Lenny, 2020) related to developmental stages, namely: (1) Sensorimotor Stage (Age 0-2 Years), (2) Preoperational Stage (Age 2-7 Years), (3) Concrete Operational Stage (Age 7-11 Years), (4) Operational Stage Formal (Ages 12 and Over). Piaget believed that we all go through all four stages, although each stage may occur at different ages.

Grade V elementary school students are the right reason to use them to practice creative thinking skills because at that age they are included in the concrete operational development stage, meaning that students have demonstrated logical and concrete reasoning.



They can understand that events don't always relate to them and that other people have a different point of view. Elementary school class V students freer in expressing themselves so that they are more creative in thinking.

Willis (2011) suggests that all humans go through each level, but at different speeds. So, it is possible for a 6-year-old child to be at the concrete operational level. Meanwhile, there is a child aged 8 years who is still at the pre-operational level in the way of thinking. However, the sequence of intellectual development is the same for all children, the structure for the previous level being integrated and included as part of the following levels. The researcher chose class V as the place of research, because in terms of the ability of educators, the experience of educators, and students who support using Quizizz-based creative thinking assessment instrument.

Based on the results of interviews conducted with several respondents, They assume that in the assessment process educators have never conducted an assessment using a creative thinking skills assessment instrument. The assessment so far carried out by educators is a written test in the form of multiple choice questions and a description test contained in the "Bupena" teacher and student handbook in which each question requires students to answer according to the answer key, regardless of the student's process of answering, question, so that it focuses on the final answer of the student. Students' creative thinking skills need to be trained and developed by accustoming students to answering questions that can train creative thinking skills, so that students are not afraid to give various ideas/ideas by developing the opinions of other students. This can be done if educators provide a conducive and enjoyable learning process. Indirectly, educators are required to have expertise in technology to improve the learning process (Putri, et al., 2022).

Arnseth & Hatlevik (2012) emphasizes that educators are seen as the main key in implementing technology-based learning. According to Hamid (2016) Currently there are many assessment instruments used, but most are still paper-based. Educators can apply assessments by utilizing technological developments through a technology-based application. Based on the results of this study, Quizizz is an effort to accommodate the problems of conventional learning media with ICT-based learning to increase students' competence and learning motivation because the resulting learning media provides innovative, creative and fun learning models that are easy to use and more enjoyable. known by educators and students compared to other applications (Yulia, 2019).

LITERATURE REVIEW

A. Assessment Instrument

Assessment instrument is a part that is integrated with the planning and implementation process of learning. The real conditions of schools and learning indicators in achieving competency standards and basic competencies become a reference for the use of various methods and procedures assessment instrument used. Assessment instrument carried out as an effort to measure the level of achievement of learning indicators and collect information on the development of student learning in various aspects. Aspects that are measured include cognitive, psychomotor, and affective aspects as indicated by a change in the paradigm of students' thinking, both individually and in groups (Astuti, et al., 2014).

The principle of assessment according to the assessment guide for elementary schools is based on the following principles (Ministry of Education and Culture, 2015): 1). Valid, means the assessment is based on data that reflects the ability being measured. 2). Objective, meaning that the assessment is based on clear procedures and criteria, not influenced by the subjectivity of the appraiser. 3). Fair, means that the assessment does not benefit or harm students because they have special needs and differences in religious, ethnic, cultural, customs, social status, economic, and gender backgrounds. 4). Integrated, meaning that the assessment by educators is an integral component of learning activities. 5). Open, means that the evaluation procedure, assessment criteria, and basis for decision making can be known by interested parties. 6). Comprehensive and continuous, meaning that assessment by educators covers all aspects of competency by using various appropriate assessment techniques, to monitor the progress of students' abilities. 7). Systematic, means that the assessment is carried out in a planned and gradual manner by following standard steps. 8). Based on the criteria, it means that the assessment is based on the achievement of the specified competence. 9). Accountable, meaning that the assessment can be accounted for, both in terms of techniques, procedures and results.

Based on the above opinion, it can be concluded that in essence in carrying out the assessment process educators must pay attention to the principles of assessment so that the goals of the assessment can be achieved properly. These principles are: (1). The principle of totality, whole or comprehensive, is carried out to describe the behavior of students as a whole, (2). The principle of continuity, carried out regularly, continuously from time to time, planned and scheduled, (3). The principle of objectivity, must be regardless



of the interests of the subject, (4). Must reflect real world problems, (5). Must use various measures, methods, and criteria according to the characteristics and essence of the learning experience.

B. Skills Assessment Instrument Creative Thinking

Education standards in the 21st century that is students have the ability to think creatively in solving problems. Therefore, this research is focused on 21st century problem solving skills. Coon & Miterer (2014) states that, creative thinking or creativity is a problem solving activity carried out through an unconsciously experiential process which includes fluency in generating a number of ideas, flexibility, using time in producing various types of solutions, and the novelty of the ideas or solutions produced. Solutions and ideas are new and fresh require several stages which provides the final result in the form of a unique opinion in learning. The stages of the creative thinking process include the following stages (Santrock, 2011) : (1) preparation; at this stage a person begins to be interested in a problem, (2) incubation; at this stage someone thinks of a number of unusual ideas to solve problems, (3) knowledge; at this stage someone generates a unique solution in solving the problem, (4) evaluation; at this stage testing whether the resulting solution can be used to solve the problem or not, (5) elaboration; at this stage the resulting solution is detailed and expanded so that it becomes even better. The existing creative thinking skills assessment instrument does not meet the requirements for the development of a creative thinking skills assessment instrument, due to a lack of understanding of what creative dimensions are to be measured, so the assessment is subjective. Deporter & Mike (2013) states that creative problems go through specific stages, namely: (a) Preparation (defining the problem, goals or challenges); (b) Incubation (digesting facts and processing them in the mind); (c) Illumination (pushing ideas so they appear); and (d) Verification (confirming whether the solution actually solves the problem). (e) Application (take steps to follow up on the solution).

The development of creative thinking assessment is carried out through five stages, namely (Abidin, 2016): (1) determine the standards to be measured; (2) define the constructs to be assessed; (3) determine authentic tasks that will be done by students; (4) develop assessment criteria; and (5) develop an assessment rubric. Development of creative thinking includes (Torrance, 1969): (a) Fluency, (b) Flexibility, (c) Originality, (d) Elaboration. Based on the steps for developing the creative thinking assessment instrument above, that creative type in opinion is a construct of a creative thinking assessment. Through the knowledge gained students can interpret ideas comprehensively and recognize mistakes, and know how to distinguish between errors and overcome difficulties, as well as in the learning process it is necessary to encourage students to understand problems, improve students' creative thinking skills in preparing plans for solving and involve students actively in finding their own solutions to problems.

C. Meaning of Quizizz

Quizizz is online, which means it can be used easily if it is supported by adequate internet access. Using Quizizz is very easy. This interactive quiz has up to 4-5 answer choices including the correct answer. You can also add an image to the background of the question and adjust the question settings to your liking. Quizzes can be shared with students using the generated 6-digit code (Salsabila, et al., 2020). Quizizz is one of the efforts to accommodate the problems of learning media in Indonesia that cannot be applied conventionally. Therefore, the existence of this quizizz application really helps educators in giving quizzes that are fun and don't have to be face-to-face in class. There are two modes Quizizz, i.e. modes creator (via quizizz.com) in this case the teacher and student mode (via quizizz.com/join) in this case the students. Each student who joins does not need to create an account Quizizz, they can join directly by using the game code shared by educators (Angga, 2022). Based on this, a number of features have been developed on Quizizz. The features developed are: (1) Can make various types of slides as quizzes such as multiple choice, survey, fill in the blank, open ended, series, as well as a combination of presentation slides and quizzes. Quizizz do not directly evaluate the series features because the system cannot evaluate them. (2) Writing text that is more adaptive and flexible (3) A wider variety of text formats (4) Can change the color of the screen (5) Can add images with search that is integrated with Google. (6) Can load various types of media in one slide such as text, audio, and video. (7) Can load more interactive math equations such as semi-copy and paste from Microsoft Word. (8) Can import all slides and questions from public quizzes with just one click (9) Can insert various themes from other websites such as padlet, geogebra, google, wikipedia, learning house, google forms, and google slides. (10) Can import interactive presentations from powerpoint, canva, and google slides into Quizizz (Yulia, 2019).



RESEARCH METHODS

The type of research used in this research is research and development or called Research and Development (R&D). This study applies a type of development research using the ADDIE model (Analysis Design-Develop-Implement- Evaluate). The preparation of this instrument uses the ADDIE (Analysis Design-Develop-Implement-Evaluate) development model. The Quizizz-based creative thinking skills assessment instrument is designed in the form of non-printable teaching materials which will be uploaded to the Quizizz application. The assessment instrument that will be developed by the researcher consists of a content section containing basic competencies (KD), learning objectives and indicators, themes, supporting information, and question sheets. Steps for developing creative thinking instruments include:

Step 1: Analysis

Activities to collect information that occurs in the field in the form of problems that occur in the learning process. This stage plays a role in analyzing the curriculum used to find out the curriculum and teaching materials used in elementary schools. Then a theme analysis was carried out to determine the themes that would be included in the assessment instrument for creative thinking skills based on the syllabus for thematic learning of fifth grade elementary school students. The results of the field study conducted show that educators are accustomed to using the "Bupena" handbook in the assessment process, so educators never make up their own questions. The data needed is an assessment instrument for creative thinking skills that has been used by educators. The sources of data obtained were in the form of interviews and document instruments for assessing the creative thinking skills of educators in grade V elementary schools using observation sheets in the learning process to obtain problem solving in the form of teacher learning device profiles.

Step 2: Design

Activities to design prototypes of creative thinking skills assessment instruments to find out what indicators will be planned to appear in the assessment process, so that students' creative thinking skills can be measured using the developed creative thinking skills assessment instrument. After determining the indicators of creative thinking skills that appear in the assessment process, then designing a grid of creative thinking skills assessment instruments. At this stage do:

(1) The design of this development research that will be planned to appear in the assessment process is an indicator of creative thinking skills and what will be measured are (a) Fluency, (b) Dexterity, (c) Originality, (d) Elaboration

Then determine the scale used to measure students' creative thinking skills. The scale used is a Likert scale which consists of five criteria. (2) integration of the creative thinking skills assessment instrument and the initial design of the creative thinking skills assessment instrument in the use of the Quizizz application. The results obtained are draft 1 of the Quizizz-based creative thinking skills assessment instrument.

Step 3: Development

The assessment instrument developed focuses on cognitive assessment only, namely creative thinking skills. After product design is carried out, instrument validation activities are carried out by validators and practitioners to assess the feasibility of draft 1 of the creative thinking skills assessment instrument that has been produced. Product validation is carried out by experts, namely evaluation experts, media experts and linguists. Using a product validation sheet. The results obtained are in the form of draft 2 assessment instruments for creative thinking skills. The product developed is in the form of a Quizizz-based creative thinking skills assessment instrument.

Step 4: Implementation

After the assessment instrument for creative thinking skills has been validated and revised, the product is tested. Product trial activities to implement products that have been developed by researchers, products are tested on experts evaluation, media experts and linguists. The results of the expert trial were revised to improve the product before being tested on fifth grade students. (Product Validity Data, Product Practicality Data, Question sensitivity)

Step 5: Evaluation

In this evaluation phase, activities are carried out to collect data from the results of expert validation and trials of educators and students. The results of the data are evaluated as a basis for determining which assessment instrument for creative thinking skills is appropriate for use as an assessment instrument in thematic learning and assists in achieving the desired learning objectives. This



evaluation is analyzed to measure the level of attainment of themes and creative thinking skills from the learning activities that have been carried out, as well as to measure students' creative thinking skills as a result of the knowledge and skills carried out.

RESULTS AND DISCUSSION

Based on the results of the development of an assessment instrument for creative thinking skills based on Quizizz in the thematic learning of fifth grade elementary school students. The data obtained is described among others as the validity, sensitivity and practicality of the Quizizz-based creative thinking skills assessment instrument in the thematic learning of fifth grade elementary school students. Referring to the ADDIE development model which includes five stages, namely the analysis stage, the design stage, the development stage, the implementation stage, and the evaluation stage. The results of this study can be described as follows:

1. Analysis Stage

Several process stages are passed in making the instrument for assessing students' creative thinking skills starting from the preliminary stage. Obtained data in the form of types of assessment instruments used by students at school. This research was conducted with the aim of making an assessment instrument for creative thinking skills, where researchers have obtained information from educators. The results of the analysis of the data obtained are:

- 1.1 The results of the field study conducted show that educators think that in the assessment process educators have never conducted an assessment using a creative thinking skills assessment instrument. The initial condition of particular concern is the type of assessment instrument applied in schools. The assessment instrument only measures memorization and comprehension aspects. Obviously this does not benefit students to practice creative thinking skills. Developing creative thinking skills requires regular practice or working on assessment instruments oriented to creative thinking skills.
- 1.2 The results of the literature study carried out obtained data or information related to the product being developed, the researcher studied it from books or the research results of other researchers. The relevant research results are used so that the creative thinking assessment instrument is as expected, so the alternative is to deepen the study through literature studies that support the development of creative thinking skills assessment instruments by looking for relevant references.

2. Design Stage

The design of creative thinking skills instruments adapts to creative thinking indicators according to Lia (2021) which states that the indicators for creative thinking skills consist of 4 indicators, namely fluency, flexibility, original thinking, and elaboration. Product design for assessment of creative thinking skills with the following steps:

- 2.1 Determination of the form of the instrument
- 2.2 Preparation of Competency Indicators and Question Indicators
- 2.3 Arrangement of the Grid
- 2.4 Preparation of instruments

3. Development Stage

Each expert is given a validation instrument that contains question indicators and 15 essay questions in the form of answer keys and scoring guidelines. Then proceed with input from each validator in the form of criticism and suggestions in general. Finally, each validator is expected to provide a conclusion whether or not the test instrument is feasible to be tested on students. If not, then proceed to revise the questions according to input from validator.

The results of the assessment of the assessment instrument for creative thinking skills by the validator are in table 1 below:



Table 1. The results of the assessment of the creative thinking skills assessment instrument by the validator:

No.	Product	Validator Assessment Results			Eligible Revision/Eligible revisions (LR)	without with	Not feasible	Conclusion
		1	2	3				
1.	Quizizz-based creative thinking assessment instrument	LR	LR	LR	3		0	Worthy

Source: Results of research data processing

4. Implementation Stage

Product trial activities to implement products that have been developed by researchers, products are tested on experts evaluation, media experts and linguists. The product validity and practicality data will be described as follows:

a. Product Validity Data

Data validity of the product was obtained by researchers from the validation results of evaluation experts, media experts and linguists.

1. Evaluation expert validation The results of the evaluation expert validation are presented in table below:

No.	Rated aspect	Score		Percentage	Criteria
		Acquisition	Maximum		
1.	Content Eligibility	24	25	96%	Very valid
2.	Construction	23	30	76%	Valid
Total rating score		47	55	85%	Valid

Source: Results of research data processing

2. Linguist validation

The results of the validation of linguists are presented in table below:

No.	Rated aspect	Score		Percentage	Criteria
		Acquisition	Maximum		
1.	The instrument for assessing creative thinking skills uses communicative sentences	4	5	80%	Valid
2.	The creative thinking skills assessment instrument uses good and correct language according to enhanced spelling	5	5	100%	Very valid
3.	The creative thinking skill assessment instrument does not cause multiple interpretations or misunderstandings	5	5	100%	Very valid
4.	The assessment instrument for creative thinking skills uses common language	4	5	80%	Valid
5.	The construction of the language used, can explain the concept.	4	5	80%	Valid
Total rating score		22	25	88%	Very valid

Source: Results of research data processing



3. Media expert validation

The results of media expert validation are presented in table below:

No.	Rated aspect	Score		Percentage	Criteria
		Acquisition	Maximum		
1.	<i>cover</i> (Quizzizz-based creative thinking skills assessment instrument)	32	35	91%	Very valid
2.	<i>Text matter</i> (main part)	35	40	87%	Very valid
3.	<i>Usefulness</i> (Quizzizz-based creative thinking skills assessment instrument)	20	20	100%	Very valid
Total rating score		87	95	91%	Very valid

Source: Results of research data processing

b. Product Practicality Data

The practicality of the product data was obtained from the analysis of data on the results of questionnaires on the responses of students and educators of class V elementary schools in Bandar Lampung city in field trials. The following is the analysis of student response data in field trials presented in table below:

No.	Response Aspects of Gain Practicality	Percentage	Criteria
1.	Educator Response	90%	Very practical
2.	Student Response	88%	Very practical
Total Score		178%	Very practical
Average		89%	Very practical

Source: Primary Data (2023)

RESULTS OF PROBLEM SENSITIVITY ANALYSIS

The sensitivity of the question is obtained from how good the item is at differentiating the level of students' skills in creative thinking both before and after receiving the lesson. The results of the sensitivity of the Quizzizz-based product assessment instrument for creative thinking skills are around 0.35. An effective item index will be between 0.00 and 1.00. That is, the greater the index number obtained, the greater the sensitivity of the items to learning.

5. Evaluation Stage

This evaluation stage is carried out by collecting data from the results of expert validation and trials of educators and students. The results of the data are evaluated as a basis for determining whether the Quizzizz-based creative thinking skills assessment instrument is appropriate for use as an assessment instrument in learning and assists in achieving the desired learning objectives. This evaluation is analyzed to measure the level of achievement of the material and skills from the learning activities that have been carried out.

DISCUSSION

The process of making an assessment instrument for creative thinking skills goes through several stages of research and development. The stages used refer to Benny (2009) that the stages of the ADDIE model consist of Analysis, Design, Development, Implementation, and Evaluation. Researchers use the ADDIE model because in the opinion of Priangga (2021) the development of learning media using the ADDIE model gets good categories in each assessment instrument.

The first stage, namely Analysis, obtained data in the form that educators assume that in the assessment process educators have never conducted an assessment using a creative thinking skills assessment instrument. This condition represents educators that



understanding the development of assessment of creative thinking skills is difficult to do so that assessment is subjective. Students' creative thinking skills need to be trained and developed by familiarizing students with answering questions that can train students' creative thinking skills.

Haryanti & Saputra (2019) provides an explanation that educators in implementing the learning process so that students have the ability to think creatively requires steps to develop assessment instruments as follows: 1) determine standards, 2) determine constructs, 3) determine authentic tasks that will and students must do, 4) develop assessment criteria, and 5) create an assessment rubric. The creative thinking assessment instrument can be used as a reference for teachers in conducting creative thinking assessments so that assessments are objective and not subjective. This opinion is confirmed by Dewi & Marsigit (2018) that educators need to pay attention to students in posing problems which shows that fluency, flexibility, and students' novelty can be significantly increased by posing problems. Cigdem et al., (2014) also argue that a creative thinking approach must be practiced in the learning process in the classroom. Because every individual has a different way of exploring potential. This situation certainly has a different impact on each student in the teaching and learning process. Basically creative thinking competence is always related to a person's creativity in creating or producing something new (Zulfa, et al, 2018). This situation certainly has a different impact on each student in the teaching and learning process. Basically creative thinking competence is always related to a person's creativity in creating or producing something new (Zulfa, et al, 2018). This situation certainly has a different impact on each student in the teaching and learning process. Basically creative thinking competence is always related to a person's creativity in creating or producing something new (Zulfa, et al, 2018).

Instruments oriented towards creative thinking skills were developed based on data from preliminary research, namely in the form of assessment instruments used in schools, teaching systems, reviews of relevant studies, and reviews of government policies regarding national education orientation, and taking into account scientific progress and technolog

The second stage is Design. The design of the creative thinking skills assessment instrument adapted from Lia (2021) refers to indicators of creative thinking consisting of fluency, flexibility, original thinking, and elaboration. The form of the assessment instrument for creative thinking skills that is developed is an essay test. This is in accordance with Herpiana & Rosidin's research (2018) that the assessment instruments needed by students can measure critical and creative thinking skills in the form of essay tests with criteria that can stimulate student activity in understanding concepts, applying strategies and tactics in solving problems. This statement was reiterated by Taufiq, et al (2018) that the enrichment test instrument developed can measure creative thinking and problem solving skills. The results of other studies suggest different things, namely research by Shu & Mei (2005) that authentic assessment can be developed in various formats to investigate scientific cognition, both multiple choice, open, and direct test items are all proven to be sensitive in evaluating student cognition.

The researcher also made answer sheets and instructions for working on the questions which were combined into one question package. Making scoring guidelines, scoring rubrics adapted from Abidin (2016) and making validation sheets.

The next stage of Development. namely expert validation. The instruments that were validated were essay test instruments, student and educator response questionnaires. The validation results are declared valid and can be used in the field after revision. The assessment instrument was tried out before the limited field test, so previously it had to be declared valid by experts so that the data obtained could be accounted for. This statement is in accordance with the results of research by Irmaya & Sunarti (2020), namely that an item is said to be empirically valid if it meets the 4 criteria obtained in the empirical validity of the item, test reliability, level of difficulty of the item, and the discriminating power of the item. Also supported by the research results of Krisna, et al. (2019) which states that the final product of the research is a valid, reliable and practical mathematical creative thinking assessment instrument. This is because the four criteria influence each other, if one of the criteria is not met by an item, then the item cannot be declared valid. A total of 20 questions were developed, 15 items (75% of the totalquestion) declared valid to use. HasThe results of this analysis are in accordance with the results of a relevant study conducted by (Irmaya & Sunarti, 2020).

The instrument for creative thinking skills was declared valid by experts, so it was then tested on a limited scale with 15 students from 3 different schools. The limited scale trial measured the reliability and sensitivity of the assessment instrument and the responses of the students. The assessment instrument is included in the very practical category with a percentage of 88% from the student questionnaire.



Mehren & Lehmann (1984) stated that this sensitivity index (S) approach ranges from 0.00 to 1.00, with more positive values indicating items that are more sensitive to statements and vice versa. This statement is in accordance with the results obtained, namely the sensitivity of the Quizizz-based creative thinking skills assessment instrument product, which is around 0.35 with sensitive criteria. The improved instrument was tested on a wide scale in 3 classes from 3 different schools totaling 67 students. The next stage is the implementation stage. At this stage, the effectiveness and practicality of the assessment instrument for creative thinking skills is measured. Effective indicators at the implementation stage are the results of testing the effectiveness of learning assessment instruments. Sri, et al (2020) provide an illustration that the effectiveness of the learning tools that have been developed from the results of the pretest and posttest of students is very effective, when viewed from the percentage of increase through the results of the pretest and posttest by providing eight questions in the form of essays to find out whether there is an increase in students' creative thinking abilities educate. This statement is in accordance with the results of research conducted by researchers, but the effectiveness of the assessment instrument is not only seen from the results of the pretest and posttest, the effectiveness of the assessment instrument is also assessed based on the practical results obtained based on the educator's response questionnaire and the response questionnaire students on the creative thinking skills assessment instrument. Creative thinking skills are not an instant learning result that can be measured by two to three times the test is then declared good or not (Jeet & Pant, 2023). The benchmark for the success of students' creative thinking skills can be seen from the habits of students in the learning process in the classroom. This habituation must be trained and developed with the educator's habituation when learning takes place.

The habit of inviting students to think creatively can be done by providing various texts or discourses related to the concepts being studied. The text or discourse given in the lesson is then analyzed by students guided by various questions from educators. Giving text or discourse in classroom learning is expected to be a provision for students to deal with creative thinking questions which have the characteristic of always containing text or discourse in each question.

This statement represents that if students only know concepts but cannot construct and understand concepts correctly, then it is certain that these students will experience difficulties if they get creative thinking type questions because creative thinking skills assessment instruments require solutions based on a thought construction and meaningful understanding of the concept being tested. This can be done if educators provide a conducive and enjoyable learning process. This means that game-based learning can provide solutions, by utilizing existing technology, namely the Quizizz application because the use of Quizizz is considered effective and makes students more active, besides that the use of Quizizz is in line with the times that use smartphone-based interactive multimedia.

This creative thinking skills assessment instrument product has several limitations, namely the researcher does not measure the level of success of students, the researcher only focuses on making questions that meet the indicators of creative thinking. This research is expected to provide a stimulus to educators that assessment is not only to measure the completeness of student learning outcomes and students' knowledge of a theme but the assessment of students' creative thinking skills has an important role to compete with the times.

Another limitation is the use of Quizizz which requires an adequate internet network and smartphones where not all students have smartphones and schools are not facilitated by computers.

CONCLUSION

Research on developing Quizizz-based creative thinking skills assessment instruments for thematic learning of fifth grade elementary school students. Based on the results of the research and discussion on the stages of development that have been carried out, it can be concluded that is analysis of the validity of the Quizizz-based creative thinking skills assessment instrument obtained a result of 88%. Based on the validity criteria, the product development can be interpreted in the criteria of "very valid" or suitable for use. Based on the Alpha Cronbach reliability test of 0.886, it means that the Quizizz-based creative thinking skills assessment instrument was developed with reliable or consistent (steady) criteria. Therefore, the practicality analysis of the Quizizz-based creative thinking skills assessment instrument obtained a result of 89%. Based on the practicality criteria, the product development can be interpreted in the "very practical" criteria. The sensitivity of the question is obtained from how good the item is at differentiating the level of students' skills in creative thinking both before and after receiving the lesson. The results of the sensitivity of the Quizizz-based creative thinking skills assessment instrument product are around 0.35 with sensitive criteria.



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