



NEEDS ANALYSIS FOR DEVELOPING CROSSWORD-BASED ELEMENTARY SCHOOL SOCIAL SCIENCE LEARNING ASSESSMENT INSTRUMENTS

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ABSTRACT

The aim of this research is to develop a social studies learning assessment instrument based on my local cultural material for elementary school students. The importance of this research is that in elementary schools, teachers apply conventional learning so that the teaching and learning process is not effective and efficient. The use of print media-based assessment instruments makes students less enthusiastic about learning so that students' social studies learning outcomes are low. Initial research in this research was used to capture the needs of the tools needed by teachers and students. elementary school students based on Corsword that is effective and suitable for use in learning. The method used in this research is research & development (R & D) with the ADDIE model which is carried out in several stages, namely analysis, design, development, implementation and evaluation. The data is analyzed interactively and effectiveness tests are carried out to obtain the empirical benefits of the tool in the field. Research development on the products produced is carried out through expert judgment by instrument experts, media experts and stakeholders (teachers as users). The results of the research show that the development of a social studies learning assessment instrument based on my regional culture material for elementary school students based on Corssword is very valid and effective so it is suitable for use in the learning process.



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1. INTRODUCTION

Social Studies is an abstract and verbal subject about various social realities in everyday life (Ani et al., 2017; Ilham & Hardiyanti, 2020; Mikaningsih, 2014). Social studies is an integration of several social sciences aimed at teaching social studies and education. The purpose of teaching IPS is for students to become good citizens. Social Studies can help students develop an understanding in content areas to become good citizens and ensure readiness to take on their civic responsibilities (Endayani, 2017). Furthermore, the goal of Social Studies is for students to understand concepts in social life, develop commitment and awareness of social and humanitarian values, and be able to communicate, cooperate, and compete in local, national, and global societies (Kristin, 2016; Pratama et al., 2018; Susiloningsih, 2016). Social studies learning provides opportunities for students to build social relationships and foster student interaction.

Students' understanding of social studies can be observed through learning tools, one of which is the assessment sheet. Assessment is a technique to obtain information about students'

progress in school (Arifin, 2009). It is also a process of gathering student data during the learning process which is then analyzed. The results of this analysis can be used as feedback on learning or as a basis for decision-making regarding students' status. Essentially, assessment plays a role in evaluating the process, learning progress, and learning outcomes of students (Docktor, 2009; Mahdiansyah, 2019). Student learning outcome assessments must meet the principles expressed by Anderson in Destiana et al., (2020), namely meaningfulness, transparency or openness, and fairness. The student assessment data collected by teachers through appropriate procedures and assessment tools aligns with the competencies that students must achieve or pre-determined indicators. Learning outcome assessment tools can utilize current technology, which allows for faster student assessment using machines, covering routine tasks, and enabling communication anytime, anywhere. Information and Communication Technology (ICT) has a broad benefit in achieving educational goals.

Based on interviews and observations, social studies learning in elementary schools has not been effective. This is due to the lack of innovative media use by teachers. During lessons, teachers use conventional methods, which makes students less active in learning. Additionally, using print-based assessment instruments makes students less enthusiastic about learning, leading to low social studies achievement. Previous research has explained that in teaching and learning, the evaluation of learning outcomes is often neglected. This is because teachers are too focused on what to teach to students, resulting in the assessment tools used not targeting the intended outcomes. According to Asmin (2006), improving education quality cannot be separated from the application of assessments that can accurately measure the final results of a learning process. This means that quality measurement tools are needed to assess the final results of learning.

Based on the issues above, an innovative assessment tool that can attract students' attention is needed. Crosswords are one of the best and enjoyable learning media that can involve active student participation throughout the learning process without losing the essence of learning (Andri Andreas, 2003). A crossword, also known as a puzzle, is a game where players fill in empty squares with letters to form a word that matches the clues (Hamidah & Simatupang, 2020; Januari, 2014; Mustofa & Abdullah, 2017). Considering the crossword's relaxed nature and focus on similarities and differences in words, it is appropriate for students to use this as a practice tool in class, which avoids monotony in standard question-based practices (Cabana, 2020; Sitorus et al., 2013). Crosswords will be designed based on mobile technology so that students can access them independently anytime and anywhere.

Research supporting this study is that of Kruawong & Soontornwipast (2021) titled "The Development of Thai EFL Secondary School Students' English Science Vocabulary Knowledge through Science Vocabulary Crossword Puzzle (SVCP) Practices: Action Research." This study used a research planner model adopted from Kemmis and Mc Tanggart (1981). The results of the study showed that (1) the average science vocabulary knowledge score of students increased significantly by 0.05 statistically, and (2) students had positive opinions towards the SVCP practice. Additionally, research by Günter (2023) titled "Using CBA REATC strategy supported by crossword puzzle game on the topic of acid-base titrations" with a semi-experimental matched random research design using experimental and control classes. The results showed that the

understanding and academic achievement of students in the experimental group were higher than the control group.

The novelty of this research, which has not been explored in previous studies, is the development of crossword-based assessment tools in social studies learning. The purpose of this research is to develop an effective and feasible crossword-based assessment tool for social studies learning, focusing on the topic of regional culture for elementary school students.

2. METHOD

The method used in this research is research & development (R&D) with the ADDIE model, which consists of several stages: analysis, design, development, implementation, and evaluation. The subjects of this research were fifth-grade students at SD Negeri 1 Gunung Sejuk, with a total of 23 students. The trial was conducted once on a large scale in the fifth grade. Data collection was carried out using observation, interviews, and documentation. This data will be used to explain qualitative research and to collect initial empirical data in the field. Data analysis was done in two ways: qualitative and quantitative. Qualitative data consist of suggestions and feedback from the material validator, media validator, teachers, and students. Quantitative data were obtained from the validation questionnaires completed by subject matter experts, media experts, teachers, and students. For quantitative data, the classification of validation is determined using the mean score of responses, with the formula:

$$\text{Mean score} = \frac{\text{total score}}{\text{number of items}}$$

Validation results can be seen based on the classification reference according to the mean score, as shown in the following table.

Table 1. Instrument Validation Criteria.

No.	Mean Score	Validation Level
1	>4.2 – 5.0	Very Good
2	>3.4 – 4.2	Good
3	>2.6 – 3.4	Fairly Good
4	>1.8 – 2.6	Not Good
5	1.0 – 1.8	Very Poor

Source: (Widoyoko, 2012)

Meanwhile, to calculate the percentage of student responses, the following formula is used:

$$K = \frac{F}{N \times I \times R} \times 100\%$$

With the following explanations:

K= eligibility percentage

F = total score of all respondents

R = total number of respondents

N = highest score in the questionnaire

I = number of items

With the effectiveness category as follows.

Table 2. Student Response Criteria.

No.	Score Percentage	Response Level
1	81% – 100%	Very Good
2	61% – 80%	Good
3	41% – 60%	Fairly Good
4	21% – 40%	Not Good
5	0% – 20%	Very Poor

Source: (Widoyoko, 2012)

3. RESULTS AND DISCUSSION

The process of developing this crossword-based assessment instrument is carried out in five stages: analysis, design, development, implementation, and evaluation.

Analysis

In the analysis stage, several activities are conducted, including needs analysis, characteristic analysis, and material analysis. The data needed for the analysis was obtained from the results of observations and interviews with the fifth-grade homeroom teacher at SDN 1 Gunung Sejuk. Based on the interview and observation results, it was found that a crossword-based assessment instrument was highly needed due to the lack of student enthusiasm, as the school was using print-based assessment instruments. In fact, the school had adequate facilities, affordable internet access, and students were already using mobile phones in their daily lives. Therefore, innovation was needed to maximize the achievement of learning objectives. Additionally, the characteristics of students who enjoy playing games, watching videos, and animations were considered for this innovation in learning. The curriculum used at SDN 1 Gunung Sejuk, particularly for fifth grade, is the Merdeka Curriculum. The subject chosen for the development of the assessment instrument is Social Science (IPAS), focusing on social knowledge with a learning achievement (CP) of "consciously, students take action or make decisions related to daily life based on their understanding of the local wisdom of their area." The evaluation questions were designed based on local wisdom of the region, specifically Gunung Sejuk Village, including traditional foods, handicrafts, local dances, and attributes used in traditional ceremonies.

Design

In the design stage, the researcher gathered materials to create the crossword-based instrument, including content and animated images based on the needs. The evaluation consists of 10 questions with an allotted time of 20 minutes. The questions relate to the local cultural wisdom of the Buton region, including traditional dances, foods, handicrafts, and attributes used in traditional ceremonies. This crossword was created using the Wordwall website.

Development

After the crossword-based assessment instrument was designed, it was further developed based on evaluations and feedback from several expert validators, including subject matter experts and media experts, through a validation questionnaire, making it a ready-to-use media for school trials. Below is the appearance of the crossword media.



Picture 1. Crossword Media

The validation results conducted by the validators after revisions are as follows.

Table 3. Validation Results.

Validator	Total Score	Average Score	Category
Subject Expert	60	4.0	Good/Valid
Media Expert	65	4.3	Very Good/Very Valid

Based on Table 3, the validation results indicate that the crossword-based assessment instrument is declared valid because it obtained an average score of 4.0 from the subject expert with a "Good/Valid" category and an average score of 4.3 from the media expert with a "Very Good/Very Valid" category, meaning the crossword-based assessment instrument can be tested in schools.

Implementation

Before the crossword-based assessment instrument is implemented for students, it was first evaluated by the fifth-grade teacher to test the feasibility of the crossword media. The results of the feasibility test conducted by the fifth-grade teacher after revisions are as follows.

Table 4. Feasibility Test Results.

Validator	Total Score	Average Score	Category
Fifth-Grade Teacher	63	4.2	Very Good/Very Valid

Based on Table 4, the feasibility test results indicate that the crossword-based assessment instrument is declared very good for testing with fifth-grade students because the average score is 4.2 with a "Very Good/Very Valid" category.

The instrument, declared feasible, was then tested once with the fifth-grade students of SDN 1 Gunung Sejuk, with a total of 23 students. After completing the crossword-based assessment instrument, the students were asked to evaluate it through a response questionnaire to test the effectiveness of the learning media. The effectiveness test results by the students are as follows.

Table 5. Effectiveness Test Results.

Respondent	Total Score	Percentage	Category
Fifth-Grade Students	1380	80%	Good

Based on Table 5, the effectiveness test results indicate that the crossword-based assessment instrument is declared effective, with a student response percentage of 80% and a "Good" category.

Evaluation

The evaluation stage is conducted to assess the developed learning media, which is the development of the crossword-based assessment instrument for social studies, specifically on the topic of "My Regional Culture" for elementary school students. The purpose of the evaluation is also to improve any deficiencies in the product to make it more perfect. The evaluation at this stage is formative, conducted at each stage of analysis, design, development, and implementation. Based on the validation results from subject matter experts and media experts, it was found that the media is good and highly feasible for school trials. Based on the assessment from the fifth-grade homeroom teacher at SDN 1 Gunung Sejuk, the developed learning media product was deemed good.

The crossword-based assessment instrument for the social studies subject that has been developed was validated and is suitable for development and application in the learning process. The crossword-based assessment instrument is used as an evaluation tool for the topic "My Regional Culture." This crossword media is very popular among students because the evaluation

questions are designed as a game that challenges students to complete it. This is evident from the student response results, with a percentage of 80%. In addition to being a game, the crossword also serves as a medium that sharpens students' thinking skills, especially in the left brain, as students must fill in blank spaces with letters that form words, both horizontally and vertically (Barlacchi et al., 2014; Cahyo, 2011). Based on research by Wahyuni (2018), it was found that crossword media can have a positive effect on improving student learning outcomes. Research by Saran & Kumar (2015) revealed that the use of crosswords can create a comfortable learning atmosphere for students, allowing them to be more productive in mastering the subject matter.

4. CONCLUSION

Based on the results and discussion, the development of the crossword-based assessment instrument for social studies (IPS) on the topic of "My Regional Culture" for elementary school students has been developed using the ADDIE model. It is considered valid, feasible, and effective, and therefore can be used in social studies learning on the "My Regional Culture" topic for fifth-grade students. The researcher provides the following suggestions in this study: (1) The researcher suggests that the fifth-grade homeroom teacher at elementary education use the crossword-based assessment instrument, especially for social studies on the topic of "My Regional Culture." (2) The researcher also suggests that future researchers develop crossword-based assessment instruments for social studies or other subjects.

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