



## Project-based Authentic Assessment Needs Analysis for Teachers in Primary Schools

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### Abstract

Learning and assessment are an inseparable whole. Assessment, if designed appropriately, thoroughly and used appropriately in assessment procedures, can contribute to effective learning and have an impact on the competence of quality students. This study aims to analyze the need for project-based authentic assessment of teachers in elementary schools. This research includes descriptive qualitative research on elementary school teachers in Banjarnegara Regency, Central Java. Data was collected through literature studies of reputable international articles indexed by Scopus and field studies through questionnaires distributed to 103 elementary school teachers, interviews, and documentation studies of 10 elementary school teachers. Data analysis using the Miles and Huberman model includes: data collection, data reduction, data presentation, and conclusions. The results of the study showed that the majority of teachers' assessments focused on the knowledge aspect using a multiple-choice test, the attitude aspect using observation, and the skill aspect using project assessment. Due to a lack of references, teachers struggle to develop assessment instruments and thus lack a clear rubric. The conclusion of this study is

that teachers have difficulty implementing project-based authentic assessments so they need a practical authentic assessment companion book.

**Keywords:** *authentic assessments, project-based, primary school teacher.*

### **Abstrak**

Pembelajaran dan penilaian menjadi satu kesatuan yang tidak dapat dipisahkan. Penilaian bila dirancang dengan tepat, menyeluruh dan digunakan secara tepat dalam prosedur penilaian dapat berkontribusi pada pembelajaran yang efektif serta berdampak pada kompetensi peserta didik yang berkualitas. Penelitian ini bertujuan untuk menganalisis kebutuhan penilaian autentik berbasis proyek terhadap guru di sekolah dasar. Penelitian ini termasuk penelitian kualitatif deskriptif terhadap guru Sekolah Dasar di Kabupaten Banjarnegara, Jawa Tengah. Data dikumpulkan melalui studi literatur artikel internasional bereputasi terindeks scopus dan studi lapangan melalui kuesioner yang dibagikan terhadap 103 guru SD, wawancara, dan studi dokumentasi terhadap 10 guru SD. Analisis data menggunakan model Miles dan Huberman meliputi: pengumpulan data, reduksi data, penyajian data, dan kesimpulan. Hasil penelitian menunjukkan bahwa bentuk penilaian mayoritas guru pada aspek pengetahuan menggunakan tes pilihan ganda, aspek sikap dengan menggunakan observasi, dan aspek keterampilan diukur dengan penilaian proyek. Guru kesulitan dalam mengembangkan instrumen penilaian sehingga tidak memiliki rubrik yang jelas diakibatkan kurangnya referensi. Simpulan penelitian ini bahwa guru kesulitan menerapkan penilaian autentik berbasis proyek sehingga membutuhkan buku pendamping penilaian autentik yang praktis.

**Kata kunci:** *penilaian autentik, berbasis proyek, guru sekolah dasar.*

## **INTRODUCTION**

Authentic assessment can be realized through innovative learning to contribute effectively to improving student competence. Authentic assessment can thoroughly and validly assess learners' abilities, including knowledge, attitudes, and skills (Damayanti et al., 2017). A competent teacher is a teacher who knows when, what, and how to assess learners to increase learning potential (Darling-Hammond et al., 2020). Learning can be meaningful to learners when taught appropriately, engaged well, and adequately assessed by competent teachers (Okoye, 2014).

Today's learning by teachers does not only focus on factual knowledge but also the development of 21st-century skills such as critical thinking, creative thinking, collaboration, and problem-solving (Worapun et al., 2022; Şahin & Kılıç, 2023). Learning by prioritizing these skills can prepare students to be better prepared to face complex challenges in a constantly changing and evolving world. By having these skills, learners can better adapt, innovate, and contribute positively in various areas of life, both in the world of work and in social contexts.

The implementation of authentic assessment to teacher learning is still experiencing obstacles. The evaluation carried out by teachers still uses traditional assessment in evaluating students' understanding of knowledge, so it differs from the needs of these 21 skills. Henry & Fernandez (2019) that conventional assessments conducted by teachers cannot help develop the higher-order thinking skills learners need to face challenges. Ahmad et al. (2020) that conventional assessments are standardized, indirect, and inauthentic, so scores generated from

learner performance do not provide any information about the development. Assessment focuses only on memorizing and remembering facts related to low-level cognitive skills.

Teachers who apply authentic assessment can positively enhance students' abilities. Rizavega (2018) that authentic assessment can improve students' mathematical communication skills and discipline through the PBL model at SMAN Semarang. Zaim et al. (2020) believe that authentic assessment can develop speaking skills in English subjects in SMP West Sumatera. Damayanti et al. (2017) revealed that authentic assessment instruments could measure critical thinking skills on global warming material at SMA Lampung. Developing authentic assessment instruments can improve learning outcomes at SD Negeri Pematangsiantar (Manurung et al., 2022). Authentic assessment significantly improves academic achievement and attitudes toward prospective teacher students in Turkey (Ozan, 2019). Learning complemented by authentic assessment effectively facilitates performance and fosters a positive attitude toward achieving what is needed in the future (Sabtiawan et al., 2019).

Authentic assessment involves real-world context through contextual learning. This assessment is carried out through interesting and meaningful activities using various assessment methods so that students can measure their level of achievement and development (Gulkers et al., 2004). Authentic assessments incorporate open-ended performance tasks that allow students to validly demonstrate their abilities (Koh et al., 2018). To become a professional, knowledge and disciplinary skills are needed, as are critical thinking, creativity, problem-solving, decision-making, communication, collaboration, and innovation (Villarroel et al., 2019).

Aziz et al. (2020) revealed that teachers experienced obstacles related to classroom assessment. Teachers need help in planning and carrying out authentic assessments accurately. They are also burdened with a lot of school administration work and need more knowledge. Syaifuddin (2020) also revealed that the limitation of time and accuracy in implementing authentic assessments is an obstacle for teachers. Maznah et al. (2019) stated that there still needs to be a better understanding of the meaning and application of authentic assessment among teachers.

The obstacles found by teachers impact the implementation of assessments in classroom learning. Teachers use traditional assessments to measure students' abilities. Teachers cannot test the extent to which students have understood concepts or provide complex information through traditional assessments (Moon et al., 2005). Yudha et al. (2019) that traditional assessment can only measure memorization knowledge memory, so it cannot describe student performance comprehensively. For teachers, using authentic assessments is a waste of time, energy, and expensive because they need to be well-designed.

Problem-solving related to teachers' obstacles in conducting authentic assessments has been carried out in various ways. Koh & Luke (2009) that the professional development of teachers in designing authentic assessments is a key requirement of the education system in Singapore, thereby improving teacher pedagogical competence and student learning outcomes. Sabtiawan et al. (2019) state that improving the quality of authentic assessments is achieved through various efforts and trials with cooperative learning guidelines. Teachers expressed the need for training on implementing authentic assessments in the classroom

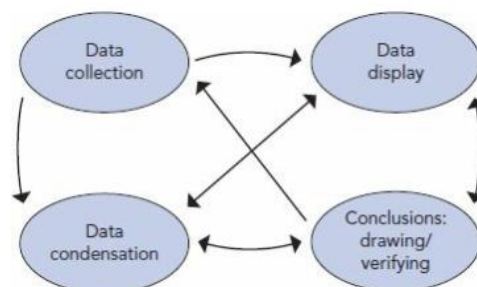
(Singh et al., 2022). However, this method has yet to improve teachers' understanding of implementing authentic assessments in learning.

There are several research results related to developing authentic assessment instruments to assist teachers in the learning process. Agustina and Wahyuni (2024) suggest that junior high school students can engage in authentic assessment by using valid and practical circle material stories. Barrientos Hernán et al. (2023) found that authentic assessments can be used in physical education, referring to assessment techniques so that real and actual learning instruments and activities are needed. Haryanti et al. (2023) noted that teachers who can implement authentic assessment need to understand the principles of authentic assessment so that it impacts on the achievement of social studies learning goals in elementary schools.

This study is different from previous research. Research on authentic assessments conducted through project-based learning in elementary schools is still rare. According to Mopara & Sanrattana (2023), there are several ways for teachers to develop 21st-century skills through project-based authentic assessment: 1) collaborate on projects; 2) collaborate in solving problems; 3) the learning process presents real-world scenarios to students so that they can identify potential problems or challenges; 4) learning is not only in the classroom but can be done outside the classroom; 5) encourage learners to generate innovative ideas in problem-solving; 6) motivate students in setting success criteria through projects and utilizing criteria to assess and refine the designs and solutions that students have made; and 7) provide opportunities for reflection for learners. This study describes the teachers' needs for authentic assessment through project-based learning in elementary school.

## METHODS

This research is a type of descriptive qualitative research that aims to obtain data related to teachers' needs for authentic project-based assessment. The study was conducted for six months in the 2022-2023 school year in Banjarnegara district, Central Java. This study was conducted on elementary school teachers with more than five years of experience. The subjects of the study were ten elementary school teachers for interviews and documentation studies, and questionnaires filled in as many as 103 teachers. Research using the interactive model of Miles and Huberman (Miles et al., 2014) can be seen in Figure 1 below:



**Figure 1. Qualitative Data Analysis**

Figure 1 illustrates that the initial step, data collection, involves gathering research data from both literature and field studies. The literature study is conducted using various sources, including reputable international articles indexed by Scopus, which are related to authentic assessment research in the field of education and relevant previous research. Field studies are carried out through questionnaires, interviews, and documentation studies on teacher

administration. The second step is data condensation, selecting appropriate data based on reference sources used to support research objectives. The third step is to display and present valid and accurate research data. The data presented combines important information into a single unit and is easy to understand in the form of tables and interview quotes. The fourth step involves drawing conclusions, providing a description, and verifying the research data.

Data collection is done through literature studies and field studies. The literature study utilizes references from [www.scopus.com](http://www.scopus.com), specifically using the keyword "authentic assessment in education" and a journal source limit of either 2013-2023 or the last ten years. Field studies include questionnaires, interviews, and documentation studies. The interview was conducted using semi-structured interview sheets *face-to-face* with ten grade 5 teachers, who were recorded with a recording device and then transcribed (Cresswell, 2017). The interview sheet includes 27 questions regarding authentic assessment practices applied by teachers in learning, such as assessment form (9 questions), assessment instrument (6 questions), mechanism (6 questions), and implementation time (6 questions), according to Permendikbud Nomor 21 Tahun 2022 Regarding Assessment Standards at the Basic Education Level.

A questionnaire is a series of questions in paper, pencil, or computer format used to measure many variables (Gall et al., 2003). The questionnaire is a list of questions distributed to respondents to fill in each statement. The questionnaire was distributed to 103 elementary school teachers through a *Google form*, and then the data was analyzed using *Microsoft Excel*. The questionnaire consists of 16 questions using a Likert scale of 1-4. The question indicators align with the Minister of Education Regulation Number 21 of 2022, which stipulates that authentic assessments conducted by teachers must include the following: 1) forms of assessment (3 questions), 2) assessment instrument (4 questions), 3) assessment mechanism (5 questions), and 4) assessment time (4 questions). Respondents provide a checklist in accordance with the answer choice column. The answer column consists of four choices that respondents can choose according to the actual conditions related to authentic assessment practices teachers apply in learning.

Documentation studies involve the collection, documentation, request, and analysis of research documents (Gall et al., 2003; Cresswell, 2017). The documentation study in this study by examining the administrative records of grade V teachers includes a) a Learning Implementation Plan, b) assessment grids, c) assessment instruments, d) grade lists, and e) teacher books/assessment manuals used by teachers. A document analysis was conducted on ten elementary school teachers in the Banjarnegara district. The results of the documentation study are collected, analyzed, and then written in the report. Sugiyono (2018) employs a triangulation technique to ensure data validity by contrasting the outcomes of interviews, questionnaires, and documentation studies.

## **RESULTS AND DISCUSSION**

The application of authentic assessment to the learning process carried out by teachers through preliminary studies includes literature studies and field studies. This study describes the teachers' needs for *authentic assessment* through *project-based learning* in elementary school. More detail can be detailed in the following description:

The field studies are conducted through teacher questionnaires, interviews, and documentation studies. The results of the analysis based on a questionnaire of 103 teachers on the form, instrument, mechanism and time of assessment carried out by teachers can be seen in the following Table 1.

Table 1. Results of Authentic Assessment Analysis

Aspect	Indicator	Analyse Results			
Form of Assessment	Knowledge Aspect	Multiple choice (58%)	short form (16%)	description (16%)	Matchmaking (10%)
	Attitude Aspect	Observation (68%)	Self-assessment (14%)	Peers (10%)	Journal (8%)
	Skill Aspect	Practice (22%)	Product (26%)	Project (49%)	Portfolio (3%)
Assessment Instruments	Rubric Knowledge Aspect	Never (67%)	Seldom (17%)	Sometimes (9%)	Always (7%)
	Rubric Attitude Aspect	Never (66%)	Seldom (11%)	Sometimes (11%)	Always (12%)
	Rubric Skill Aspect	Never (61%)	Seldom (15%)	Sometimes (10%)	Always (14%)
	Difficulty	Never (16%)	Seldom (15%)	Sometimes (16%)	Always (53%)
Assessment Instruments	Rubric Knowledge Aspect	Never (67%)	Seldom (17%)	Sometimes (9%)	Always (7%)
	Rubric Attitude Aspect	Never (66%)	Seldom (11%)	Sometimes (11%)	Always (12%)
	Rubric Skill Aspect	Never (61%)	Seldom (15%)	Sometimes (10%)	Always (14%)
	Difficulty	Never (16%)	Seldom (15%)	Sometimes (16%)	Always (53%)
Assessment Mechanism	Assessment Refers to Basic Competencies	Never (6%)	Seldom (44%)	Sometimes (22%)	Always (28%)
	Assessment refers to Learning indicators.	Never (5%)	Seldom (19%)	Sometimes (15%)	Always (61%)
	Assessment refers to test Indicators.	Never (27%)	Seldom (29%)	Sometimes (24%)	Always (20%)
	Assessment Mechanism Constraints	Never (15%)	Seldom (19%)	Sometimes (27%)	Always (39%)
Assessment Time	Constraints on Assessment Application	Lack of understanding (29%)	Lack of references (45%)	Lack of socialization (13%)	Lack of training (13%)
	Instrument Preparation	Never (40%)	Seldom (23%)	Sometimes (20%)	Always (17%)
	Assessment is done at the beginning and end.	Never (19%)	Seldom (19%)	Sometimes (35%)	Always (27%)
	Contextual	Never (22%)	Seldom (23%)	Sometimes (32%)	Always (23%)
	Challenging Tasks	Never (30%)	Seldom (22%)	Sometimes (22%)	Always (26%)

Table 2. Analogical reasoning categories of students solving word problems  
base problem close-ended, target problem open-ended

<b>Analogical reasoning categories</b>	<b>n</b>	<b>%</b>	<b>Subjects</b>
Open comprehensive analogy	2	8%	P1 and P2
Semi-open comprehensive analogy	11	44%	P3 and P4
Failure close-open analogy	12	48%	P5 and P6

Description:  
n = the number of students in each category  
P1-P6 = Research subjects in each category

The results of the analysis in Table 1 above, show that the results of the questionnaire for 103 teachers in the implementation of authentic assessment are 60 teachers or 58% using a written test in the form of multiple choice. The attitude assessment that teachers often use using observation is as many as 70 teachers or 68%. The majority of teachers as many as 50 teachers or 49% chose to use project assessment in assessing students' skills.

Regarding the use of assessment instruments, the majority of teachers stated that they had never used the project-based assessment rubric in social studies learning. Teachers stated that as many as 69 teachers, or 67%, had never used the rubric for assessing knowledge aspects, 68 teachers, or 66%, on attitude aspects, and 63 teachers, or 61% teachers on skills aspects. Data supports this condition, as 55 teachers, or 53% of teachers, reported that creating a project-based assessment rubric is always challenging.

Only 29 teachers (28%), using the project-based authentic assessment mechanism in social studies learning, consistently refer to basic competencies as outlined in the curriculum. The majority of teachers, as many as 63 teachers or 61%, always refer to learning indicators. In contrast, 30 teachers, or 29%, reported that they rarely refer to test indicators based on the operational verbs (KKO) they use as a reference. Teachers always need help with the authentic assessment mechanism. Up to 40 teachers, or 39%, participate in project-based assessment in elementary school social studies learning. Teachers also need help implementing authentic assessments in the classroom. As many as 46 teachers, or 45%, need references.

Regarding the implementation of project-based authentic assessment in social studies learning, 41 teachers, or 40%, have never prepared an assessment instrument. In implementing project-based authentic assessment time (36), teachers, or 35%, sometimes conduct assessments from the beginning to the end of learning. Teachers stated that the authentic assessment time was 33 teachers or 32%, and sometimes gave assignments contextually. Teachers, as many as 33 people or 22% sometimes, when they want to do authentic assessments, provide challenging tasks for students.

The interview related to the assessment form consists of nine (9) questions—question (1) related to the type of authentic assessment of aspects of knowledge in learning. The results of interviews with ten resource persons that 100% of teachers cannot answer completely can only mention some types of authentic assessments in aspects of knowledge. There was even one teacher who answered a type of portfolio assessment that needed to be an authentic type of assessment of aspects of knowledge. Question (2) related to the type of authentic assessment of aspects of knowledge in learning. The results of interviews with ten resource persons revealed that 100% of teachers were only able to provide a partial list of authentic

assessments related to aspects of knowledge. There was even one teacher who answered a type of portfolio assessment that needed to be authentic in terms of aspects of knowledge. Question (2) pertains to the type of authentic assessment that should be used in learning. Question (3) pertains to the authentic assessment of aspects of knowledge that are challenging to apply in learning. The interviews with ten resource persons revealed that 80% of teachers find it challenging to assess a significant amount of social studies material, 10% find it easy to assess, and 10% find it challenging to assess critical thinking skills.

Question (4) related to the type of authentic assessment of attitudinal aspects of learning. The results of interviews with ten interviewees showed that 100% of teachers could only partially mention the type of authentic assessment of attitude aspects. Question (5) is an authentic assessment of attitudinal aspects often used in learning. The interviews with ten resource persons showed that 100% of teachers use observation in assessing students' attitudes. Question (6) related to authentic assessment of attitudes that are difficult to apply in learning. The results of interviews with ten resource persons 100% revealed that it took much work to assess students in the social studies learning process—question (7) related to the type of authentic assessment of the skill aspect. The interviews with ten resource persons showed that 10% of teachers could name the type of skill assessment, and 90% of teachers had not used the complete type of assessment—question (8) related to the type of authentic assessment of the skill aspect. The results of interviews with ten speakers showed that 30% used practice, 40% projects, 20% portfolios, and 10% performances. Question (9) related to authentic assessment of skills that are difficult to apply in learning. The results of interviews with ten resource persons found that 70% were difficult in project assessment and 30% were difficult in practical project assessment.

The findings in the documentation study on the Learning Implementation Plan (RPP) that teachers use in learning are that teachers need to develop themselves but download them on the internet (*Google*), so project-based authentic assessment attachments are not available. Teachers who rarely create assessment grids when conducting assessments in social studies learning use project-based authentic assessment grids. Assessment instruments used by teachers in implementing project-based, authentic assessments of social studies learning are available. However, only written tests are available to measure aspects of knowledge, for aspects of attitudes and skills do not exist. The values teachers use in authentic project-based assessments include only aspects of knowledge and not aspects of attitudes and skills. Teachers use only government textbooks as handbooks for authentic assessments.

Teachers need to understand the principles of assessment as a reference for teachers in conducting authentic assessments. Assessment needs to be carried out objectively, openly, accurately, thoroughly, fairly, based on criteria, and accountable (Baroroh & Hamani, 2019; Wildan, 2017). Project-based authentic assessment in elementary schools not only measures knowledge competence but also measures attitudinal and skill competencies carried out early in learning, during learning, and at the end of learning (Haryanti et al., 2021; Munandar & Junita, 2020; Wulandari et al., 2021).

Teachers conduct assessments through multiple-choice tests, and even though they refer to competency standards, they cannot measure the important competencies needed by students outside of school (Palm, 2008). Traditional teacher assessments emphasize rote memorization, and redefinition fails to accurately gauge the learning and skills of students (Kearney, 2013;



Ozan, 2019). This indicates that teachers should employ alternative written assessments, such as questions based on descriptions. Assessment must be done in various forms to collect evidence of student learning outcomes (Kraiger et al., 1993; Clark & Hsu, 2023). Written tests provide an idea of the extent to which learners understand concepts and learning materials. A well-designed written test can objectively indicate a learner's level of understanding.

Many observations are made by teachers in observing the attitudes of students in the learning process (Kawuryan et al., 2018; Nupus et al., 2021; Putri & Fathoni, 2022; Sundari et al., 2023). Teachers can carry out assessment of attitude aspects through the following stages: 1) observing the behavior of students during learning; 2) recording student behavior using observation sheets; 3) following up on the results of observations; and 4) describing student behavior (Ministry of Education and Culture, 2016). Teachers can observe the behavior and attitudes of students during social studies learning. Observations take place directly in the classroom when learners interact with friends or in situations involving socially relevant contexts. This observation allows teachers to observe learners' attitudes, such as conscientiousness, confidence, independence, creativity, cooperation, curiosity, active participation, or appreciation of cultural perspectives and diversity.

Project assessment is commonly carried out by all teachers (Fitriati et al., 2021; Davy Tsz Kit et al., 2022; Hoddin, 2023;). Project Assessment is a learning task given by teachers to students, and it includes planning, implementation, and reporting activities in writing and orally within a predetermined period (Wahyuni & Ruhimat, 2018). Students must pay attention to management, relevance, and authenticity in project assessment (Bolat & Karakuş, 2017; Hoddin, 2023). Project assignments require learners to apply social studies skills in a real context. For example, students make observations, analyze data, design strategies, or develop work plans related to relevant social issues.

Project assessment is necessary in providing concrete student performance data related to real-world insight and motivation (Ibrahim & Nashir, 2022). Assessments by teachers need to be carried out through complex and learner-centered activities to produce products (Munandar et al., 2020). Authentic assessment in project-based learner activities can develop collaboration skills (Maznah et al., 2019). Project assessments provide opportunities for learners to create, collaborate, and apply their knowledge in relevant and meaningful situations. This can increase learners' motivation and engagement in learning and provide a more comprehensive picture of their understanding of the concepts and skills learned.

Teachers should use assessment rubrics to assess students' learning outcomes, ensuring that the results are authentic and accountable (Haryanti et al., 2021). In assessing student learning outcomes, teachers emphasize what should be assessed, processes, and results using various assessment instruments according to Core Competencies and Basic Competencies (Wulandari et al., 2021). Teachers use instruments as assessment guidelines (Haryanti & Saputra, 2019). Teachers in developing authentic assessment instruments can use the following steps: 1) determine standards, 2) determine constructs, 3) determine authentic tasks that students will and must do, 4) develop assessment criteria, and 5) create assessment rubrics (Abidin, 2016; Moon, 2005; Mueller, 2005; Villarroel et al., 2019). Teachers need to plan balanced assessments using a variety of assessment instruments. In this way, teachers can emphasize understanding, the learning process, and the overall learning outcomes of learners.

Various assessment instruments provide a more comprehensive picture of learners' abilities and assist teachers in providing useful feedback and supporting learners' development.

The results of research by Munandar and Junita (2020) and Haryanti et al. (2021) show that teachers rarely use assessment instruments in measuring student competence, especially in aspects of attitudes and skills. Authentic assessment instruments can meaningfully and significantly measure the learning outcomes of students in aspects of attitudes, skills, and knowledge (Pantiwati & Nyono, 2020; Sabtiawan et al., 2019). Teachers need help understanding and applying authentic assessments appropriately. A lack of understanding of authentic assessment principles and a lack of training can hinder teachers in effectively designing and executing authentic assessments.

Authentic assessment provides ideas for learners through five dimensions, namely: 1) realism, 2) cognitive challenges, 3) affective challenges, 4) evaluative assessments, and 5) feedback (Dawson et al., 2021). Teachers need to strengthen continuous and thorough assessment practices. Teachers can involve learners in the assessment process, use appropriate assessment instruments, and provide targeted and constructive feedback regularly. Thus, teachers can monitor learners' progress, identify their needs, and support their development during the learning process.

Learning requires the ability of teachers to plan and implement interesting learning according to the situation, conditions, and characteristics of students (Akbar, 2021). To make students active, creative, and excited during the learning process and to achieve learning goals, teachers must be skilled in developing the components of lesson plans in the teacher's book (Worapun et al., 2022). The components of RPP include 1) instructional objectives to be achieved, 2) subject matter, 3) teaching methods, 4) teaching aids, and 5) assessment as a measure of whether or not learning objectives are achieved (Clark & Hsu, 2023; Stefani et al., 2021).

## **CONCLUSION**

The study's results indicate that teachers frequently utilize multiple-choice, observation-based attitude assessments, and project-based assessments to measure student skills. Teachers conducting authentic project-based assessments are constrained in the preparation of instruments so that they do not use the assessment rubric. Teachers need help carrying out authentic assessments due to the lack of references, so authentic assessments are sometimes not carried out from the beginning to the end of learning in a contextual or challenging manner for students. This research can be used as input for schools to overcome the problems found by teachers in conducting project-based authentic assessments in elementary schools. This research is still limited to analyzing the needs of teachers in social studies learning. Further research can be developed to produce project-based authentic assessment companion books that teachers can use practically.

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