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ASSESSMENT LITERACY COMPETENCE OF PROSPECTIVE INDONESIAN LANGUAGE TEACHERS IN DEVELOPING LEARNING ASSESSMENT INSTRUMENTS

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ABSTRACT

Assessment literacy is an essential pedagogical competence that prospective teachers must possess to effectively design and implement learning assessment. This study aimed to analyze the assessment literacy competence of prospective Indonesian language teachers in developing learning assessment instruments. A quantitative descriptive approach using document analysis was employed. The study involved 29 fourth-semester students of the Indonesian Language and Literature Education Study Program at Universitas PGRI Sumatera Barat during the 2025/2026 academic year. The data consisted of assessment instruments developed by the students and were evaluated using an assessment rubric covering five components: alignment of learning objectives, formulation of learning indicators, selection of assessment techniques, development of assessment instruments, and construction of scoring rubrics. Data were analyzed descriptively using percentage scores for each component. The findings revealed that the students' assessment literacy competence was classified as Very Good, with an overall achievement score of 88.97%. The achievement scores for each component were 88.62% for learning objectives, 88.62% for learning indicators, 89.14% for assessment techniques, 88.62% for assessment instrument development, and 89.83% for scoring rubric construction. These findings indicate that the prospective teachers demonstrated strong competence in developing assessment instruments aligned with learning objectives. However, further improvement is needed to strengthen the alignment among learning objectives, indicators, assessment techniques, assessment instruments, and scoring rubrics. This study provides empirical evidence for strengthening assessment literacy in teacher education and offers practical implications for improving Learning Assessment courses in teacher education institutions.

Keywords: *assessment literacy; prospective Indonesian language teachers; learning assessment; learning evaluation; assessment instruments*

INTRODUCTION

The transformation of education in the twenty-first century has shifted the

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learning paradigm from a knowledge-oriented approach toward the development of critical thinking, creativity, communication, collaboration, and lifelong learning competencies. This transformation has repositioned assessment from merely measuring learning outcomes to becoming an integral part of the learning process through *assessment for learning and assessment as learning*, both of which support improvements in instructional quality and students' learning development (Yan, 2021; Pastore, 2023; DeLuca et al., 2022; OECD, 2023; OECD, 2024; UNESCO, 2021).

This paradigm shift requires teachers to possess assessment literacy, defined as the competence to design, implement, interpret, and effectively utilize assessment to support learning. Assessment literacy encompasses the ability to formulate learning objectives, develop learning indicators, select appropriate assessment techniques, construct assessment instruments and scoring rubrics, and use assessment results to inform instructional decision-making (Xu & Brown, 2021). Teachers with a high level of assessment literacy are able to produce valid and objective assessments while providing meaningful feedback that promotes student learning (Yan & Pastore, 2022).

The importance of assessment literacy has become increasingly evident with the implementation of the *Merdeka* Curriculum in Indonesia, which positions assessment as an essential component of the teaching and learning process. Teachers are expected to align learning objectives, learning indicators, assessment techniques, assessment instruments, and scoring rubrics so that assessment functions not only as a means of assigning grades but also as a mechanism for improving learning. Consequently, assessment competence has become a key aspect of teacher professionalism. Within teacher education, such competence should be developed during pre-service preparation. Prospective teachers are expected not only to understand the theoretical foundations of educational assessment but also to apply these concepts by developing assessment tools that meet the principles of validity, reliability, objectivity, and educational usefulness. Therefore, the Learning Assessment course plays a strategic role in developing the pedagogical readiness of prospective teachers.

Numerous studies have identified assessment literacy as a continuing challenge for both in-service and pre-service teachers. Recent research has demonstrated that assessment competence is shaped by teachers' assessment knowledge, practical experiences, professional preparation, and contextual factors within educational settings. Xie (2021) emphasized that pre-service teachers require continuous opportunities to develop assessment literacy through authentic assessment practices, as theoretical understanding alone is often insufficient for effective assessment implementation. Similarly, Sulistio (2023) found that pre-service teachers generally possess an understanding of assessment concepts but still face challenges in applying assessment principles in practice, particularly in designing appropriate assessment tasks and instruments. Furthermore, Kao (2023) and Güngör and Güngör (2023) reported that pre-service teachers often experience difficulties in developing valid assessment tools, interpreting assessment evidence, and constructing appropriate scoring rubrics despite having basic knowledge of assessment concepts.

In Indonesia, the implementation of the *Merdeka* Curriculum has encouraged improvements in assessment practices. Nevertheless, previous studies indicate that teachers and prospective teachers continue to face challenges in aligning learning

objectives, learning indicators, assessment techniques, assessment instruments, and scoring rubrics. These findings suggest that strengthening assessment literacy should become a priority in teacher education programs. Although research on assessment literacy has grown considerably, most studies have focused on teachers' perceptions or conceptual knowledge measured through questionnaires and knowledge tests. Research examining the quality of authentic assessment products developed by prospective teachers, particularly those enrolled in Indonesian Language and Literature Education programs, remains limited. Consequently, there is still a significant research gap concerning prospective teachers' actual competence in developing learning assessment instruments.

To address this gap, the present study offers a novel perspective by analyzing the assessment literacy competence of prospective Indonesian language teachers through direct evaluation of the assessment instruments they developed. The evaluation employed an assessment rubric covering five essential components: alignment of learning objectives, formulation of learning indicators, selection of assessment techniques, development of assessment instruments, and construction of scoring rubrics. This approach provides empirical evidence of prospective teachers' ability to apply assessment principles in authentic educational practice.

Accordingly, this study aims to analyze the assessment literacy competence of prospective Indonesian language teachers in developing learning assessment instruments. The findings are expected to contribute to the advancement of assessment literacy research and provide practical recommendations for improving teacher education programs, particularly courses related to educational assessment.

LITERATURE REVIEW

2.1. Introduction

Assessment literacy has emerged as a fundamental component of teacher professional competence, particularly as educational systems worldwide increasingly emphasize competency-based learning and authentic assessment practices. The ability of teachers to design, implement, and evaluate meaningful assessment instruments directly influences the quality of instructional decision-making and student learning outcomes. This literature review synthesizes contemporary theoretical perspectives and empirical findings on teacher assessment literacy, with particular attention to the competencies required for developing learning assessment instruments. The review addresses four major areas: (1) the conceptualization and dimensions of teacher assessment literacy; (2) theoretical frameworks underpinning assessment competence; (3) key components of quality assessment instrument development; and (4) factors influencing the development of prospective teachers' assessment literacy.

2.2. Conceptualizing Teacher Assessment Literacy

2.2.1. Defining Assessment Literacy

The concept of teacher assessment literacy has evolved significantly over the past three decades. Originally defined by Stiggins (1991) as teachers' understanding of the principles of sound assessment and their ability to apply those principles in classroom practice, the construct has expanded to encompass broader dimensions of professional knowledge and practice. Contemporary definitions emphasize not only

technical knowledge of assessment design but also the ability to integrate assessment with instruction, interpret assessment data, and use assessment information to support student learning (Xu & Brown, 2021; Yan & Pastore, 2022).

Recent scholarship has shifted from viewing assessment literacy as a static set of skills to recognizing it as a dynamic, context-dependent competence that develops through experience and reflection. Xu and Brown (2021) proposed a comprehensive framework positioning teacher assessment literacy as an interplay of knowledge, skills, and dispositions, emphasizing that effective assessment practice requires teachers to understand the purposes of assessment, select appropriate assessment methods, construct quality instruments, and use assessment results to inform instructional decisions. Similarly, Yan and Pastore (2022) conceptualized assessment literacy as a multidimensional construct encompassing teachers' assessment knowledge, assessment practices, assessment design competence, and the ability to interpret and use assessment information to support learning.

2.2.2 The Dimensions of Assessment Literacy

Contemporary research has identified several core dimensions of teacher assessment literacy that are essential for effective classroom practice. DeLuca et al. (2022) synthesized the literature to identify five key dimensions: (1) knowledge of assessment purposes and principles; (2) competence in designing and developing assessment instruments; (3) ability to implement assessment practices effectively; (4) capacity to interpret and communicate assessment results; and (5) commitment to ethical and equitable assessment practices.

The competence dimension has received particular attention in recent research on teacher education. Pastore (2023) emphasized that assessment design competence is foundational to teacher assessment literacy, as it directly influences the quality of evidence collected about student learning and the validity of subsequent instructional decisions. This perspective aligns with findings from Chan and Luk (2021), who demonstrated that teachers with stronger assessment design competence produce more valid and reliable assessment instruments and are better equipped to align assessment practices with learning objectives.

Miyazaki (2024) extended this analysis by examining how assessment literacy manifests in specific classroom contexts, finding that teachers' ability to translate general assessment principles into contextually appropriate practices represents a crucial aspect of professional competence. This contextual dimension is particularly relevant for prospective teachers who must learn to apply assessment knowledge in diverse classroom settings.

2.3. Theoretical Frameworks for Understanding Assessment Competence

2.3.1. Constructive Alignment and Assessment Design

Constructive alignment, as articulated by Biggs (1996), provides a foundational framework for understanding quality assessment design. The principle posits that learning objectives, instructional activities, and assessment tasks must be coherently aligned to ensure meaningful learning outcomes. O'Neill (2021) extended this framework by emphasizing that constructive alignment requires teachers to establish explicit connections between intended learning outcomes, teaching and learning activities, and assessment practices, ensuring that assessment accurately measures the

competencies targeted in the learning process.

Recent studies have demonstrated that constructive alignment serves as both a design principle and an evaluative framework for assessing the quality of assessment instruments. Hailikari et al. (2022) found that alignment between learning objectives and assessment criteria significantly influences the validity of assessment interpretations and the quality of instructional decision-making. Similarly, Loughlin et al. (2023) demonstrated that strong alignment among learning objectives, learning indicators, and assessment tasks improves the accuracy of measuring students' competencies and supports meaningful feedback practices.

2.3.2 Bloom's Revised Taxonomy and Formulating Learning Outcomes

The Revised Bloom's Taxonomy proposed by Anderson and Krathwohl (2001) provides a widely adopted framework for formulating learning objectives and indicators. The taxonomy categorizes cognitive processes into six levels-remembering, understanding, applying, analyzing, evaluating, and creating-each associated with specific operational verbs that describe measurable student behaviors.

Research has consistently demonstrated that teachers' ability to select appropriate operational verbs and align them with intended cognitive outcomes is a critical component of assessment literacy. Scully (2021) found that prospective teachers who demonstrated proficiency in applying Bloom's Taxonomy produced more precise learning objectives and more aligned assessment items. O'Neill (2021) further emphasized that mastery of cognitive process dimensions supports teachers in developing assessment instruments that appropriately measure the complexity of intended learning outcomes.

2.3.3 The Competency-Based Assessment Framework

The shift toward competency-based education has significantly influenced approaches to teacher assessment literacy. Competency-based assessment emphasizes measuring students' ability to apply knowledge and skills in authentic contexts rather than merely recalling factual information. This approach requires teachers to develop assessment instruments that capture complex performances and to construct scoring rubrics that clearly differentiate levels of competency achievement (Lestari & Yusuf, 2024; Barthakur et al., 2023).

The *Merdeka* Curriculum implemented in Indonesia exemplifies this competency-based approach, emphasizing student-centered learning and authentic assessment practices (Kemendikbudristek, 2022; Kemendikdasmen, 2024). Under this framework, teachers are expected to develop assessment instruments that align with learning objectives, employ diverse assessment techniques, and provide meaningful feedback to support student learning. This policy context underscores the importance of strengthening prospective teachers' assessment literacy during their initial teacher education programs.

2.4. Key Components of Quality Assessment Instrument Development

2.4.1 Formulating Learning Objectives and Indicators

The formulation of learning objectives represents the foundational step in developing quality assessment instruments. Clear, specific, and measurable learning objectives provide the basis for selecting appropriate assessment strategies and evaluating students' learning evidence (Crisco & Porterfield, 2023). Research indicates

that well-formulated learning objectives include three essential elements: the expected competencies, learning content, and intended learning outcomes.

Learning indicators serve as the bridge between broad learning objectives and specific assessment tasks. Xu and Brown (2021) emphasized that teachers' ability to translate learning objectives into measurable indicators is a core component of assessment literacy. Yan et al. (2021) further highlighted that effective assessment practices require teachers to develop indicators that align intended learning outcomes with assessment processes and instructional decisions.

Despite the recognized importance of well-formulated indicators, research consistently reveals challenges among both practicing and prospective teachers. Atjonen et al. (2022) found that pre-service teachers often demonstrate basic understanding of assessment concepts but struggle to construct precise, measurable, and contextually appropriate learning indicators. Similarly, Oo et al. (2022) reported that insufficient understanding of assessment principles may lead to difficulties in establishing valid assessment criteria and aligning assessment components.

2.4.2 Selecting Appropriate Assessment Techniques

The selection of appropriate assessment techniques is widely recognized as an essential component of teacher assessment literacy. Assessment-literate teachers are expected to make informed decisions regarding assessment approaches by considering learning objectives, competency characteristics, and the type of evidence required to demonstrate student achievement (Yan et al., 2021; DeLuca et al., 2022). Rather than applying assessment methods based on routine practices, teachers must ensure that assessment strategies are appropriately connected to instructional purposes.

Recent research has emphasized the principle of "fitness for purpose" in selecting assessment techniques. Kao (2023) demonstrated that teachers who select assessment methods aligned with learning objectives produce more valid interpretations of student learning. Wyatt-Smith et al. (2024) further emphasized that assessment methods should match the nature of the competencies being assessed, with different competencies requiring different types of evidence and, consequently, different assessment approaches.

Authentic assessment has gained prominence in contemporary educational discourse, emphasizing the evaluation of students' competencies through tasks that represent real-world situations. This approach requires teachers to employ diverse assessment techniques, including written assessments, performance-based tasks, project assessments, and portfolios, to capture the complexity of student learning (DeLuca et al., 2022; Tao et al., 2024).

2.4.3 Developing Quality Assessment Instruments

The development of quality assessment instruments requires systematic attention to validity, reliability, and practicality. Content validity, in particular, refers to the extent to which assessment items adequately represent the intended learning outcomes and content domain. Hailikari et al. (2022) emphasized that valid assessment instruments demonstrate strong alignment between assessment items and learning indicators, ensuring that items measure the competencies they are intended to assess.

Research has identified common weaknesses in assessment instrument development among prospective teachers. Oo et al. (2022) found that pre-service

teachers frequently produce assessment items that measure multiple competencies within a single question, contain ambiguous wording, or exhibit inconsistent levels of difficulty. These weaknesses may reduce the validity and reliability of assessment interpretations and highlight the need for targeted training in item construction.

Loughlin et al. (2023) emphasized that assessment instruments should be systematically developed through a process of drafting, review, and revision. This iterative process, supported by feedback from teacher educators and peers, has been shown to improve the quality of assessment items and strengthen prospective teachers' assessment design competence.

2.4.4 Constructing Effective Scoring Rubrics

Scoring rubrics serve as essential tools for evaluating students' performance and learning outcomes objectively. A well-designed rubric includes clear, measurable assessment criteria that are consistently aligned with learning objectives and learning indicators. Panadero and Jonsson (2021) explained that well-designed rubrics can improve the clarity of performance expectations, support consistent assessment judgments, and promote students' understanding of quality criteria.

Rubrics serve a dual function in assessment practice. Bennett et al. (2022) highlighted that effective rubrics guide teachers in evaluating student performance while also helping learners interpret assessment criteria for self-regulation and improvement. Thus, scoring rubrics should not be viewed merely as grading instruments but as pedagogical tools that facilitate feedback, reflection, and the development of students' learning processes.

Despite recognition of the importance of quality rubrics, research has identified persistent challenges in rubric development. Giraldo (2021) found that pre-service teachers often produce performance descriptors that are overly general, making distinctions between achievement levels insufficiently clear. Such inconsistencies may result in different interpretations among assessors and reduce the reliability and consistency of assessment outcomes. Giraldo further argued that the ability to develop effective scoring rubrics evolves through authentic practice, critical reflection, and continuous professional learning.

2.5. Factors Influencing the Development of Prospective Teachers' Assessment Literacy

2.5.1 The Role of Teacher Education Programs

Research consistently demonstrates that teacher education programs play a critical role in developing prospective teachers' assessment literacy. Hill et al. (2022) found that the ability to formulate learning objectives and design assessment instruments develops significantly when prospective teachers are provided with repeated opportunities to design instructional materials accompanied by constructive feedback from teacher educators. Similarly, Koh et al. (2023) demonstrated that assessment literacy is gradually developed through the interaction of theoretical knowledge, authentic assessment experiences, feedback, and opportunities for professional growth.

Recent studies have emphasized the importance of integrating assessment content across teacher education curricula rather than confining it to a single assessment course. Xu and Brown (2021) argued that assessment literacy should be developed through sustained engagement with assessment practices throughout

teacher preparation programs. This integrated approach enables prospective teachers to connect assessment theories with practical classroom applications and to develop a more comprehensive understanding of the role of assessment in supporting student learning.

2.5.2 Authentic Learning Experiences and Reflection

Authentic experiences in designing and implementing classroom assessment contribute substantially to the development of prospective teachers' assessment literacy. Atjonen et al. (2022) found that prospective teachers' assessment literacy develops through continuous engagement with assessment practices and reflective learning experiences. Oo et al. (2022) similarly highlighted that practical involvement in assessment-related activities enables prospective teachers to improve their capacity to design assessment components that are consistent with intended learning outcomes.

Research has identified several types of authentic learning experiences that support assessment literacy development. Kulgemeyer et al. (2023) demonstrated that participation in microteaching, case-based learning, and collaborative assessment design projects strengthens prospective teachers' ability to apply assessment principles in authentic classroom contexts. Güngör and Güngör (2023) further demonstrated that practical engagement in classroom assessment helps pre-service teachers improve their ability to make appropriate assessment choices and connect assessment methods with instructional goals.

Reflective practice is another essential component of assessment literacy development. Atjonen et al. (2022) emphasized that the development of assessment literacy requires more than conceptual understanding; it is strengthened through critical reflection on assessment practices and outcomes. This perspective aligns with findings from Koh et al. (2023), who demonstrated that prospective teachers who engage in systematic reflection on their assessment designs produce higher quality assessment instruments.

2.5.3 Contextual and Curriculum Factors

The broader educational context significantly influences the development of prospective teachers' assessment literacy. Recent policy reforms, such as the implementation of the *Merdeka* Curriculum in Indonesia, have created new demands for teacher assessment competence. The *Merdeka* Curriculum emphasizes student-centered learning, competency-based assessment, and authentic assessment practices, requiring teachers to demonstrate sophisticated assessment literacy (Kemendikbudristek, 2022; Kemendikdasmen, 2024).

Research has shown that prospective teachers' understanding of assessment is shaped by their experiences as students, their teacher education programs, and the educational policies governing the systems in which they will teach. Lestari and Yusuf (2024) found that Indonesian prospective teachers' assessment literacy is influenced by their exposure to competency-based curriculum frameworks and their opportunities to practice designing assessment instruments aligned with curriculum requirements.

2.6. Summary and Implications

This literature review has synthesized contemporary theoretical perspectives and empirical findings on teacher assessment literacy, with particular attention to the competencies required for developing learning assessment instruments. The review has

demonstrated that assessment literacy is a multidimensional construct encompassing knowledge of assessment principles, competence in designing assessment instruments, and the ability to use assessment information to support learning.

The theoretical frameworks of constructive alignment (O'Neill, 2021; Hailikari et al., 2022) and Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001; Scully, 2021) provide foundational guidance for understanding quality assessment design. The key components of assessment instrument development-formulating learning objectives and indicators, selecting assessment techniques, developing assessment instruments, and constructing scoring rubrics-represent essential competencies for teachers (DeLuca et al., 2022; Pastore, 2023).

The development of prospective teachers' assessment literacy is influenced by multiple factors, including the quality of teacher education programs (Hill et al., 2022; Koh et al., 2023), authentic learning experiences and reflection (Atjonen et al., 2022; Oo et al., 2022), and the broader educational context, including curriculum policies (Lestari & Yusuf, 2024; Kemendikbudristek, 2022). These findings have important implications for teacher education, suggesting that assessment literacy should be developed through sustained, integrated, and authentic learning experiences accompanied by systematic feedback and reflection.

Future research should continue to examine effective approaches for developing prospective teachers' assessment literacy, particularly in the context of competency-based curricula such as the *Merdeka* Curriculum. Studies that investigate the specific strengths and weaknesses of prospective teachers' assessment designs can inform the refinement of teacher education programs and contribute to the preparation of assessment-literate teachers who can effectively support student learning through meaningful assessment practices.

METHODS

This study employed a quantitative descriptive approach using document analysis as the primary research method. This approach was selected to describe the assessment literacy competence of prospective Indonesian language teachers based on the quality of the learning assessment instruments they developed. Document analysis enabled the researchers to systematically examine authentic evidence in the form of assessment materials produced by the students without manipulating the research objects (Morgan, 2022; Kiger & Varpio, 2020; Creswell & Creswell, 2023).

The study was conducted in the Indonesian Language and Literature Education Study Program, Universitas PGRI Sumatera Barat, during the second semester of the 2025/2026 academic year. The research population consisted of all fourth-semester students enrolled in the Learning Assessment course. Since the population size was relatively small, a total sampling technique was employed, resulting in all 29 students being included as research participants (Sugiyono, 2023).

The research data consisted of learning assessment instruments developed by the students as part of their course assignments. Each participant was required to prepare one complete assessment package consisting of: (1) learning objectives, (2) learning indicators, (3) assessment techniques, (4) assessment instruments, and (5) scoring rubrics. Recent studies on teacher assessment literacy emphasize that these

components represent essential competencies required for teachers to design, implement, and evaluate meaningful assessment practices (Xu & Brown, 2021; Yan & Pastore, 2022). These five components were selected because they reflect key dimensions of assessment literacy, including the ability to align learning objectives with assessment criteria, construct valid assessment instruments, and develop appropriate scoring rubrics (DeLuca et al., 2022; Pastore, 2023).

The research instrument was an assessment literacy evaluation rubric developed based on a synthesis of recent research on teacher assessment literacy, particularly focusing on teachers' knowledge, assessment practices, assessment design competence, and the ability to interpret and use assessment information to support learning (Chan & Luk, 2022; DeLuca et al., 2022; Miyazaki, 2024), while also incorporating the assessment principles of the *Merdeka* Curriculum (Kemendikbudristek, 2022; Kemendikdasmen, 2024). The rubric assessed five components: (1) alignment of learning objectives, (2) formulation of learning indicators, (3) selection of assessment techniques, (4) quality of assessment instrument development, and (5) quality of scoring rubric construction. Each component was evaluated using a four-point rating scale, where 1 = Poor, 2 = Fair, 3 = Good, and 4 = Very Good, based on operationally defined assessment criteria.

Prior to data collection, the rubric was validated through expert judgment involving two university lecturers specializing in educational evaluation and assessment. The validation focused on the alignment between the rubric indicators and the assessment literacy construct, the clarity of the assessment criteria, and the measurability of each component. Feedback from the experts was used to refine the rubric, ensuring adequate content validity and consistency in document evaluation. Data were analyzed using descriptive quantitative techniques, in which the scores for each component were calculated and converted into percentages.

The percentage scores were then categorized according to the following criteria: 86-100% = Very Good; 76-85% = Good; 60-75% = Fair; and ≤59% = Poor. The findings were presented in the form of score distribution tables, percentages, and descriptive explanations to illustrate the level of students' assessment literacy competence across each analyzed component. The results were interpreted by relating the findings to established theories of assessment literacy and previous empirical studies, thereby providing a comprehensive understanding of the pedagogical readiness of prospective Indonesian language teachers in developing learning assessment instruments.

RESULTS AND DISCUSSIONS

4.1. Results

This study aimed to analyze the assessment literacy competence of prospective Indonesian language teachers in developing learning assessment instruments. The analysis focused on five major components: (1) alignment of learning objectives, (2) formulation of learning indicators, (3) selection of assessment techniques, (4) development of assessment instruments, and (5) construction of scoring rubrics. All analyzed documents were produced by 29 students enrolled in the Learning Assessment course.

Overall, the findings indicate that the students' assessment literacy competence

falls within the Very Good category, with an average achievement score of 88.97%. These results demonstrate that most students were able to develop learning assessment instruments in accordance with the fundamental principles of educational assessment. Nevertheless, several aspects still require improvement, particularly in maintaining consistency among learning objectives, learning indicators, assessment techniques, assessment instruments, and scoring rubrics as an integrated assessment system.

Table 1. Summary of Prospective Teachers' Assessment Literacy Competence

Assessment Literacy Component	Percentage (%)	Categori
Alignment of Learning Objectives	88,62	Very Good
Formulation of Learning Indicators	88,62	Very Good
Selection of Assessment Techniques	89,14	Very Good
Development of Assessment Instruments	88,62	Very Good
Development of Scoring Rubrics	89,83	Very Good
Average	**88,97**	**Very Good**

As shown in Table 1, all assessment literacy components achieved percentage scores above 86%, indicating that they were classified as *Very Good*. The highest achievement was observed in the development of scoring rubrics (89.83%), while three components alignment of learning objectives, formulation of learning indicators, and development of assessment instruments-obtained the same score of 88.62%. Meanwhile, the selection of assessment techniques achieved a score of 89.14%. These findings indicate that the prospective teachers demonstrated a consistently high level of competence across all dimensions of assessment literacy examined in this study.

4.1.1. Alignment of Learning Objectives

The analysis of learning objectives revealed that most prospective teachers were able to formulate learning objectives that were clear, specific, and aligned with the intended learning outcomes of the course. In general, the formulated objectives incorporated the expected competencies, learning content, and intended learning outcomes, thereby providing an appropriate foundation for the development of learning indicators and assessment instruments.

Table 2. Evaluation Results of Learning Objective Alignment

Assessment Aspect	Analysis Results
Achievement Score	88,62%
Category	Very Good
Weaknesses	Learning objectives were generally formulated clearly, specifically, and aligned with the intended learning outcomes.
Strengths	Some learning objectives still contained operational verbs that were insufficiently measurable, combined multiple competencies within a single objective, and were not fully aligned with the planned assessment activities.
Implications	Greater emphasis is needed on developing learning objectives that are more specific, measurable, and consistently aligned with assessment design.

As presented in Table 2, the component of learning objective alignment achieved a score of 88.62%, which falls within the *Very Good* category. These findings indicate that the prospective teachers were generally capable of formulating learning objectives in accordance with accepted instructional design principles. Nevertheless, several weaknesses were identified, including the use of operational verbs that were not fully measurable, the inclusion of multiple competencies within a single learning objective, and the lack of complete alignment between learning objectives and the intended assessment activities. These findings suggest the need to strengthen prospective teachers' competence in formulating specific, measurable, and assessment-oriented learning objectives.

4.1.2. Formulation of Learning Indicators

Learning indicators are essential components that translate learning objectives into observable and measurable student behaviors. Therefore, the quality of learning indicators plays a crucial role in determining the appropriateness of assessment techniques and the development of assessment instruments.

Table 3. Evaluation Results of Learning Indicator Formulation

Assessment Aspect	Analysis Results
Achievement Score	88,62%
Category	Very Good
Weaknesses	Some learning indicators were formulated too broadly, making them less representative of the intended competency level. In addition, several indicators were not fully aligned with the corresponding learning objectives.
Strengths	Most learning indicators were well aligned with the learning objectives, employed measurable operational verbs, and clearly reflected the competencies expected to be achieved by students.
Implications	Prospective teachers should strengthen their ability to formulate learning indicators that are more specific, measurable, and consistently aligned with learning objectives to support the development of valid assessment instruments.

As presented in Table 3, the formulation of learning indicators achieved a score of 88.62%, which falls within the *Very Good* category. These findings indicate that most prospective teachers were able to formulate learning indicators that were aligned with the learning objectives and employed measurable operational verbs. Furthermore, the indicators generally reflected the competencies expected to be achieved by students. Nevertheless, several indicators were still formulated too broadly or lacked full alignment with the learning objectives, potentially affecting the appropriateness of the selected assessment techniques and the quality of the assessment instruments. These findings highlight the need to strengthen prospective teachers' competence in developing more specific, measurable, and well-aligned learning indicators.

4.1.3. Formulation of Learning Indicators

The selection of assessment techniques is a fundamental component of assessment literacy, as it determines the alignment between the competencies being assessed and the assessment methods employed. Appropriate assessment techniques

provide more accurate and meaningful information about students' learning achievement.

Table 4. Evaluation Results of Assessment Technique Selection

Assessment Aspect	Analysis Results
Achievement Score	89,14%
Category	Very Good
Weaknesses	Some prospective teachers selected assessment techniques based on common classroom practices rather than the characteristics of the learning objectives. In addition, a single assessment technique was sometimes used to measure multiple competencies that required different assessment approaches. To measure multiple competencies that required different assessment approaches.
Strengths	Most prospective teachers were able to select assessment techniques that matched the characteristics of the competencies being assessed, including written tests, assignments, performance assessments, and other forms of authentic assessment.
Implications	Greater emphasis should be placed on developing prospective teachers' ability to select assessment techniques that are appropriately aligned with learning objectives and competency characteristics to ensure more accurate and meaningful assessment outcomes.

As presented in Table 4, the selection of assessment techniques achieved a score of 89.14%, which falls within the *Very Good* category. These findings indicate that most prospective teachers were able to select assessment techniques that were appropriate for the competencies being assessed, including written assessments, assignments, performance assessments, and other forms of authentic assessment. However, several inconsistencies were identified. Some prospective teachers selected assessment techniques based on conventional classroom practices rather than the characteristics of the learning objectives. Furthermore, a single assessment technique was occasionally used to assess multiple competencies that required different assessment approaches. These findings suggest that prospective teachers would benefit from further training in selecting assessment techniques that are better aligned with learning objectives and competency requirements.

4.1.4. Development of Assessment Instruments

Assessment instruments are the primary tools used to collect information about students' learning achievement. Therefore, they should be systematically developed, clearly constructed, and closely aligned with the established learning objectives and learning indicators.

Table 5. Evaluation Results of Assessment Instrument Development

Assessment Aspect	Analysis Results
Achievement Score	88,62%
Category	Very Good
Weaknesses	Several assessment items measured more than one learning

Assessment Aspect	Analysis Results
	indicator within a single question, contained ambiguous wording that could lead to multiple interpretations, and exhibited inconsistent levels of difficulty across items.
Strengths	Most prospective teachers were able to develop assessment items that were aligned with the learning indicators and written in clear, communicative, and easily understandable language.
Implications	Prospective teachers need further training in developing assessment instruments that demonstrate strong content validity, clear item construction, and appropriate alignment with learning indicators to improve the accuracy of assessment results.

As presented in Table 5, the development of assessment instruments achieved a score of 88.62%, placing it in the *Very Good* category. These findings indicate that most prospective teachers were able to develop assessment instruments that were generally aligned with the learning indicators and written in clear and comprehensible language. However, the document analysis also identified several weaknesses, including assessment items that measured multiple learning indicators within a single question, ambiguous wording that could lead to different interpretations, and inconsistent levels of item difficulty. These findings suggest that prospective teachers require further support in developing assessment instruments that meet the principles of content validity, sound item construction, and alignment with learning indicators.

4.1.5. Development of Scoring Rubrics

Scoring rubrics are essential components of assessment that serve as guidelines for evaluating students' performance and learning outcomes objectively. A well-designed scoring rubric includes clear, measurable assessment criteria that are consistently aligned with the established learning objectives and learning indicators.

Table 6. Evaluation Results of Scoring Rubric Development

Assessment Aspect	Analysis Results
Achievement Score	89,83%
Category	Very Good
Weaknesses	Several scoring rubrics did not clearly distinguish performance levels across rating categories. In addition, some descriptors were overly general and were not fully aligned with the characteristics of the assigned tasks or assessment methods.
Strengths	Most prospective teachers were able to develop systematic scoring rubrics with clear assessment criteria, measurable performance descriptors, and strong alignment with the learning objectives and learning indicators.
Assessment Aspect	Some scoring rubrics did not clearly differentiate performance levels across achievement categories. In addition, several performance descriptors remained overly general and were not fully aligned with the characteristics of the learning tasks or the assessment methods employed.

Assessment Aspect	Analysis Results
Implications	Prospective teachers need further support in developing more specific and consistent performance descriptors to ensure that scoring rubrics produce objective, reliable, and practical assessment results.

As presented in Table 6, the development of scoring rubrics achieved the highest score among all assessment literacy components, with an achievement rate of 89.83%, placing it in the *Very Good* category. These findings indicate that most prospective teachers were able to develop systematic scoring rubrics that incorporated clear assessment criteria, measurable performance descriptors, and appropriate alignment with the learning objectives and learning indicators. Nevertheless, the document analysis revealed several areas for improvement. Some scoring rubrics did not clearly differentiate performance levels across rating categories, while others contained descriptors that were overly general or insufficiently aligned with the characteristics of the assigned tasks and assessment methods. These findings suggest that prospective teachers require additional training in developing more specific and consistent performance descriptors to improve the objectivity, reliability, and practicality of classroom assessment.

4.2. Discussion

4.2.1. Alignment of Learning Objectives

The findings revealed that the alignment of learning objectives achieved an overall score of 88.62%, placing this component in the Very Good category. This result indicates that most prospective Indonesian language teachers were able to formulate learning objectives that were aligned with the intended learning outcomes and clearly reflected the competencies expected to be achieved by students. These findings suggest that the participants recognized the fundamental role of learning objectives as the foundation of the assessment process.

From the perspective of assessment literacy, learning objectives represent the starting point for developing a high-quality assessment system. Recent research emphasizes that teachers' ability to align learning objectives with assessment practices is a fundamental component of effective assessment design, as clear objectives provide the basis for selecting appropriate assessment strategies and evaluating students' learning evidence (Lestari & Yusuf, 2024; Barthakur et al., 2023). This view is further supported by studies highlighting that clearly formulated learning objectives help teachers establish meaningful connections between instructional goals, assessment criteria, and feedback practices (Crisco & Porterfield, 2023). Consequently, the quality of learning objectives has a direct influence on the validity of the assessment process and the quality of instructional decision-making.

The findings of this study are also consistent with recent perspectives on teacher assessment literacy, which emphasize that effective assessment design requires teachers to integrate assessment knowledge with instructional goals and classroom practices (Yan et al., 2021; Xu et al., 2023). This framework emphasizes that the ability to design effective assessment is determined not only by teachers' technical knowledge but also by their capacity to integrate learning objectives, instructional strategies, and

assessment practices into a coherent system. Therefore, the prospective teachers' success in formulating learning objectives suggests that they have begun to apply the principle of constructive alignment, which refers to the alignment among learning objectives, learning activities, and assessment, as supported by recent studies on curriculum and assessment alignment (O'Neill, 2021; Hailikari et al., 2022).

The present findings are further supported by DeLuca et al. (2019), who reported that pre-service teachers generally demonstrate a sound understanding of learning objectives, although the quality of their implementation is strongly influenced by practical teaching experiences during teacher education. Similarly, recent research has shown that the ability to formulate learning objectives develops significantly when prospective teachers are provided with repeated opportunities to design instructional materials accompanied by constructive feedback from teacher educators (Hill et al., 2022; Koh et al., 2023). Likewise, recent studies have found that authentic experiences in designing and implementing classroom assessment contribute substantially to the development of prospective teachers' assessment literacy, as these experiences allow them to connect assessment theories with practical classroom applications (Atjonen et al., 2022; Oo et al., 2022; Kulgemeyer et al., 2023).

Although the findings of this study indicate a Very Good level of achievement, the document analysis identified several areas that still require improvement. Some prospective teachers continued to use operational verbs that were insufficiently specific or combined multiple competencies within a single learning objective. Such practices may reduce the alignment among learning objectives, learning indicators, assessment techniques, and assessment instruments. These findings are consistent with recent studies emphasizing that clearly formulated and measurable learning objectives are essential for ensuring alignment between intended learning outcomes, instructional activities, and assessment practices (Scully, 2021; Hailikari et al., 2022). Therefore, strengthening prospective teachers' competence in formulating learning objectives should remain a priority in both Learning Assessment and Instructional Planning courses, enabling them to develop more systematic, coherent, and well-aligned assessment instruments (O'Neill, 2021; Loughlin et al., 2023).

4.2.2. Formulation of Learning Indicators

The findings revealed that the prospective teachers' competence in formulating learning indicators achieved an overall score of 88.62%, placing this component in the Very Good category. This result indicates that most participants were able to translate learning objectives into specific, measurable indicators that could serve as a foundation for developing assessment instruments. Such competence represents a fundamental dimension of assessment literacy, as Xu and Brown (2021) emphasized that teachers' ability to establish clear assessment criteria and connect learning objectives with evidence of learning is a core component of assessment literacy. Furthermore, Yan et al. (2021) highlighted that effective assessment practices require teachers to develop measurable indicators that align intended learning outcomes with assessment processes and instructional decisions.

From the perspective of Constructive Alignment, learning indicators play a critical role in ensuring consistency among intended learning outcomes, learning activities, and assessment strategies. O'Neill (2021) emphasized that constructive

alignment requires a clear connection between intended learning outcomes, teaching and learning activities, and assessment practices to ensure that assessment measures the competencies targeted in the learning process. This alignment is essential for ensuring that assessment accurately measures the competencies intended to be achieved. Furthermore, Hailikari et al. (2022) and Loughlin et al. (2023) highlighted that the quality of learning outcomes and assessment criteria influences the selection of appropriate assessment methods, the development of assessment instruments, and the interpretation of students' learning evidence.

The findings further indicate that most learning indicators developed by the participants employed measurable operational verbs and reflected observable learning behaviors. This suggests that the prospective teachers had begun to apply the principles of the Revised Bloom's Taxonomy proposed by Anderson and Krathwohl (2001), particularly in selecting operational verbs that correspond to different cognitive process dimensions. Recent studies have emphasized that the use of measurable learning outcomes and appropriate cognitive verbs plays an important role in supporting assessment alignment and the development of valid assessment instruments (Scully, 2021; O'Neill, 2021). Mastery of this concept is essential because well-formulated learning indicators contribute to the development of more valid assessment instruments and provide a more accurate representation of students' competency achievement. Furthermore, research on assessment design has shown that clearly defined learning indicators and aligned assessment criteria improve the accuracy of measuring students' competencies and support meaningful instructional decision-making (Hailikari et al., 2022; Loughlin et al., 2023).

Despite these positive findings, the document analysis also revealed several weaknesses. Some learning indicators did not fully describe observable behaviors, employed overly general operational verbs, or failed to reflect the intended level of competency. In addition, several indicators were not entirely aligned with the corresponding learning objectives, potentially affecting the quality of the assessment instruments developed. Atjonen et al. (2022) emphasized that prospective teachers' assessment literacy involves the ability to translate curriculum objectives into measurable learning outcomes and appropriate assessment practices. Furthermore, Oo et al. (2022) highlighted that insufficient understanding of assessment principles may lead to difficulties in constructing valid assessment criteria and aligning assessment components. These findings highlight the need to strengthen prospective teachers' understanding and application of the principle of alignment among learning objectives, learning indicators, and assessment practices.

The findings of this study align with recent evidence indicating that prospective teachers often possess a basic understanding of assessment concepts; however, transferring this knowledge into the construction of precise, measurable, and contextually appropriate learning indicators remains challenging. Atjonen et al. (2022) explained that the development of assessment literacy among pre-service teachers requires more than conceptual understanding, as it is strengthened through continuous engagement with assessment practices and reflective learning experiences. In addition, Oo et al. (2022) highlighted that practical involvement in assessment-related activities enables prospective teachers to improve their capacity to design assessment

components that are consistent with intended learning outcomes. Furthermore, Koh et al. (2023) emphasized that assessment literacy is gradually developed through the interaction of theoretical knowledge, authentic assessment experiences, feedback, and opportunities for professional growth.

Within the context of teacher education in Indonesia, the ability to formulate learning indicators has become increasingly important following the implementation of the *Merdeka* Curriculum, which emphasizes student-centered learning and competency-based assessment. Therefore, Learning Assessment courses should not only provide conceptual knowledge of learning indicator development but also offer authentic learning experiences that enable prospective teachers to receive systematic feedback on the assessment instruments they design. Such experiences are expected to promote the comprehensive and sustainable development of assessment literacy competence.

4.2.3. Selection of Assessment Techniques

The selection of assessment techniques achieved an overall score of 89.14%, indicating that the prospective teachers demonstrated a Very Good level of competence in selecting assessment methods that matched the characteristics of the competencies being assessed. This finding suggests that the participants had begun to recognize that different learning objectives require different assessment approaches and that not all competencies can be effectively measured using the same assessment technique.

The ability to determine suitable assessment techniques is widely recognized as an essential component of teachers' assessment literacy. Recent studies indicate that assessment-literate teachers are expected to make informed decisions regarding assessment approaches by considering learning objectives, competency characteristics, and the type of evidence required to demonstrate student achievement (Yan et al., 2021; DeLuca et al., 2022). Rather than applying assessment methods based on routine practices, teachers need to ensure that assessment strategies are appropriately connected to instructional purposes. This alignment between intended learning outcomes and assessment procedures contributes to the development of valid and meaningful interpretations of students' learning progress (Atjonen et al., 2022; Pastore, 2023).

The findings of this study demonstrate that most prospective teachers were capable of selecting assessment methods that matched the competencies being evaluated, including written assessments, performance-based tasks, assignments, project assessments, and other authentic assessment approaches. This indicates that the participants had started to integrate theoretical assessment knowledge with practical decision-making when developing instructional assessment materials. Yan et al. (2021) emphasized that assessment literacy involves teachers' capacity to make appropriate assessment decisions based on learning goals, assessment purposes, and contextual considerations. Furthermore, DeLuca et al. (2022) and Tao et al. (2024) reported that opportunities to design and apply assessment practices play an important role in strengthening pre-service teachers' assessment literacy and their ability to develop meaningful assessment tasks.

Despite these positive findings, the document analysis revealed that some prospective teachers still tended to determine assessment techniques based on

practicality rather than their suitability for measuring specific learning outcomes. Several assessment documents showed that identical assessment approaches were applied to evaluate different competencies, even though each competency required different types of evidence. Atjonen et al. (2022) highlighted that developing assessment literacy requires prospective teachers to understand how assessment purposes, learning targets, and evidence of achievement are interconnected. Furthermore, Güngör and Güngör (2023) demonstrated that practical engagement in classroom assessment helps pre-service teachers improve their ability to make appropriate assessment choices and connect assessment methods with instructional goals. These findings indicate that prospective teachers need further development in applying the principle of fitness for purpose, which emphasizes the selection of assessment techniques that are appropriate to the objectives and characteristics of the competencies being assessed (Wyatt-Smith et al., 2024).

Overall, the findings demonstrate that prospective teachers have developed a strong level of competence in selecting appropriate assessment techniques. Nevertheless, further improvement can be achieved through more extensive opportunities to design diverse assessment materials, engage in case-based learning, participate in microteaching, and critically reflect on assessment outcomes. Such experiences are expected to better prepare prospective teachers for implementing effective classroom assessment in authentic school settings.

4.2.4. Development of Scoring Rubrics

The development of scoring rubrics achieved the highest score among the five assessment literacy components, with an overall achievement score of 89.83%. This finding indicates that the prospective teachers demonstrated a Very Good level of competence in developing assessment criteria and systematically describing different levels of competency achievement. In general, the scoring rubrics included clear assessment criteria, well-defined performance descriptors for each achievement level, and strong alignment with the intended learning objectives and assigned learning tasks.

Within the context of assessment literacy, scoring rubrics are considered important instruments for supporting transparent, reliable, and equitable assessment practices. Panadero and Jonsson (2021) explained that well-designed rubrics can improve the clarity of performance expectations, support consistent assessment judgments, and promote students' understanding of quality criteria. In addition, Bennett et al. (2022) highlighted that effective rubrics serve a dual function by guiding teachers in evaluating student performance and helping learners interpret assessment criteria for self-regulation and improvement. Therefore, scoring rubrics should not be viewed merely as grading instruments but also as pedagogical tools that facilitate feedback, reflection, and the development of students' learning processes.

The high achievement observed in this component suggests that the prospective teachers had developed a sound understanding of the importance of explicit assessment criteria in supporting authentic assessment. This finding is consistent with the principles of authentic assessment, which emphasize evaluating students' competencies through tasks that represent real-world situations and therefore require scoring rubrics capable of clearly differentiating levels of performance. Consequently, the ability to develop effective scoring rubrics represents an important indicator of

prospective teachers' pedagogical readiness to implement competency-based learning and assessment.

Despite these positive findings, the document analysis identified several aspects requiring further improvement. Some scoring rubrics employed performance descriptors that were overly general, making the distinctions between achievement levels insufficiently clear. In addition, several rubrics demonstrated inconsistencies between the assessment criteria, learning indicators, and the characteristics of the learning tasks being evaluated. Such inconsistencies may result in different interpretations among assessors and reduce the reliability and consistency of assessment outcomes. Therefore, prospective teachers should receive further training in developing performance descriptors that are more specific, measurable, and applicable in authentic classroom practice.

These findings are supported by Giraldo (2021), who argues that the ability to develop effective scoring rubrics evolves through authentic practice, critical reflection, and continuous professional learning. More recent studies have also demonstrated that assessment literacy develops more effectively when pre-service teachers actively participate in the design, implementation, and evaluation of scoring rubrics as an integral part of teacher education.

Overall, the findings indicate that the prospective teachers have established a strong foundation for developing objective, transparent, and competency-based assessment instruments. Nevertheless, further improvement is still required, particularly in developing more specific performance descriptors, clearly differentiating achievement levels, and ensuring consistent alignment among learning objectives, learning indicators, learning tasks, and assessment criteria.

CONCLUSION

This study aimed to analyze the assessment literacy competence of prospective Indonesian language teachers in developing learning assessment instruments by examining five key components: the alignment of learning objectives, the formulation of learning indicators, the selection of assessment techniques, the development of assessment instruments, and the development of scoring rubrics. The findings indicate that the participants' overall assessment literacy competence was classified as Very Good, with an average achievement score of 88.97%. Specifically, the alignment of learning objectives achieved 88.62%, the formulation of learning indicators 88.62%, the selection of assessment techniques 89.14%, the development of assessment instruments 88.62%, and the development of scoring rubrics 89.83%.

These findings demonstrate that the prospective teachers have developed strong competencies in designing assessment instruments that are aligned with learning objectives and learning indicators. They were also able to select appropriate assessment techniques, develop relevant assessment instruments, and construct systematic and objective scoring rubrics. Nevertheless, the document analysis identified several areas requiring further improvement, particularly in maintaining alignment among learning objectives, learning indicators, assessment techniques, assessment instruments, and scoring rubrics as an integrated assessment system. In addition, further attention should be given to developing more operational learning indicators, designing

assessment instruments capable of measuring higher-order thinking skills, and constructing more specific performance descriptors to improve the overall quality of assessment practices.

This study contributes to the growing body of research on assessment literacy in teacher education by employing document analysis to evaluate authentic assessment products developed by prospective teachers. This approach provides a more authentic representation of prospective teachers' ability to translate assessment concepts into practical assessment design, thereby complementing previous studies that have primarily measured assessment literacy through perception surveys or knowledge tests.

Based on these findings, the Indonesian Language and Literature Education Study Program is encouraged to strengthen instruction in the Learning Assessment course by emphasizing authentic assessment design activities, peer review, systematic feedback, and reflective evaluation of assessment products. Such authentic learning experiences are expected to enhance prospective teachers' assessment literacy competence and better prepare them for their future professional roles as Indonesian language teachers.

This study has several limitations. It involved participants from only one study program at a single university and focused exclusively on document analysis of assessment instruments developed by prospective teachers. Therefore, future research should include participants from a broader range of Teacher Education Institutions (TEIs) across Indonesia, combine document analysis with classroom observations and interviews, and develop instructional models specifically designed to strengthen prospective teachers' assessment literacy. Such efforts would provide a more comprehensive understanding of the development of assessment competence within teacher education programs in Indonesia.

Declaration of Conflicting Interests
There is no conflict of interest regarding the article publication

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