

Multiliteracy assessment for deep learning and critical thinking in prose education

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Article Info	Abstract
Keywords: critical thinking; deep learning; higher education; literature education; multiliteracy assessment	The dominance of surface-learning practices persists in literary education at Indonesian universities, particularly in prose instruction. Assessments focused on memorization, factual reproduction, and summative evaluation limit students' critical reflection, analytical skills, and problem-solving. In response to these gaps, this study aims to examine the potential of multiliteracy assessment as a framework to transform surface learning into deep learning and critical thinking. This study uses a qualitative case study approach, including observation, interviews, questionnaires, and document analysis. The findings reveal three main challenges: the dominance of conventional assessment (predominantly closed-ended questions), the lack of multiliteracy integration (most materials were print-text-based), and the lack of contextual strategies (most tasks focused on intrinsic analysis). In response, multiliteracy assessments emerged as a transformative approach that allows students to interpret prose through multimodal representation, contextual problem-solving, and critical inquiry. Assignments such as digital storytelling, critical essays, and collaborative performances have increased engagement, reflective skills, and 21st-century competence. The study concludes that the shift towards multiliteracy assessment significantly promotes deep learning and has practical implications for lecturers, curriculum developers, and policymakers seeking to align assessment models with global education standards.
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INTRODUCTION

Deep learning and critical thinking are two essential components in creating effective learning (Al-Mubaid et al., 2016; Harianto, 2024; Ma, 2020), especially in the development of modern educational technology (Vasile, 2024a). Deep learning is a learning process that emphasizes deep understanding of the material rather than mere memorization of facts (M. Elbashbishy, 2024; Faizah et al., 2025; Chen & Swaran Singh, 2024). This can encourage learners to develop a deep understanding of concepts and connect the knowledge gained to real-world experience. Critical thinking is defined as the ability to think logically, reflectively, and analytically to evaluate information, identify arguments, question assumptions, and make rational and evidence-based decisions (Shafieieh et al., 2024; Vincent-Lancrin, 2024). In the learning process, critical thinking encourages students not to passively receive information but to actively assess its validity, relevance, and accuracy before using it in problem-solving or decision-making.

This interaction between deep learning and critical thinking is essential for developing the cognitive skills to navigate the complex information landscape. In the context of education, deep learning fosters a deep understanding of concepts and encourages learners to engage critically with information, which is essential for adaptability and long-term retention (Kovač et al., 2023; Ru, 2024; Vasile, 2024a). In addition, this concept can connect knowledge across fields and build

a strong foundation of understanding. Meanwhile, critical thinking allows students to analyze, evaluate, and filter the information obtained so that they can distinguish valid and relevant information (Ibragimova et al., 2024; Thi Thanh Loan, 2024). Thus, the combination of deep learning and critical thinking not only deepens understanding but also fosters an analytical and reflective mindset that is important for navigating the dynamics of scientific and technological development.

Related to this, to support the strengthening of deep learning and critical thinking in the learning process, an assessment model is needed that can accommodate these processes. Assessment is an important part of learning that is inseparable from it. A good assessment can motivate learners to learn and help them achieve maximum learning outcomes by leveraging their potential. This was corroborated by Neina and Wagiran (2023), Badjeber & Purwaningrum (2018), and Evans et al. (2014), who state that assessment is an integral part of overall learning implementation and that this assessment process is necessary to determine the level of success and achieve learning objectives. In addition, the proper assessment process can train learners to think critically and creatively so that they can later survive evolving global challenges and become quality human beings.

Assessments designed to evaluate the processes of analysis, synthesis, evaluation, and application of knowledge will encourage learners to engage in deep learning and critical thinking (Alhassan, 2023; Ho & Chng, 2021; Winne, 2023). In other words, when assessment demands a high-level thought process, learners will be encouraged to study more deeply and develop the critical-thinking skills required to succeed. Thus, assessment is a tool for measuring learning outcomes and for constructing the learning process (Neina et al., 2024; Shannon, 2023). Assessments emphasizing problem-solving, analysis, and reflection will foster critical thinking and a deep understanding of the material (Rusmin et al., 2024; Sri R & Vetriveeran, 2024). This is the basic logic for why assessment can be a pedagogical tool that encourages deep learning and critical thinking, rather than merely a means of measuring outcomes. Recent evidence from Indonesian language and literature education also indicates that deep learning approaches can strengthen students' critical thinking and support more systematic, evidence-based argumentation (Dewi et al., 2026). This finding reinforces the need for learning and assessment practices that move students beyond knowledge reproduction toward analytical and reflective engagement.

However, many learning processes still lack assessments that support deep learning and critical thinking (Masuku et al., 2020; McMillan et al., 2022; Sari et al., 2024; Vasile, 2024a; Winne, 2023). Most assessment practices across educational levels, especially in environments still oriented towards final exam results, tend to focus on memorizing facts, surface-level mastery, and single correct answers. This assessment model encourages learners to focus more on surface learning, which is simply remembering material to pass the exam, without understanding concepts in depth or honing critical thinking skills.

The same thing also happens in university-level prose learning in Indonesia. Based on the analysis and field observations of the assessment process in prose learning, it is evident that it has not received adequate attention or handling from lecturers or learning implementers. Ansari (2018) notes that there are still many types of assessments in prose learning oriented towards final or learning assessment that yield quantitative scores. This is corroborated by several data points from assessments on prose learning that did not meet the criteria. Some of them were revealed that: (1) prose which is one of the subsections in literary learning has not received serious and adequate attention in the assessment of the subfield of learning; (2) the prose material that has been presented has not been balanced and has not used the appropriate measuring tools in the exam; (3) prose material that is loaded with human, moral, and life values is only tested to the extent of knowledge (cognitive); and (4) the measurement of skills (psychomotor) and attitude (affective) aspects in prose learning has not been carried out in a balanced manner (Haryati Setyaningsih et al., 2018; McArthur, 2022; Nurizzati, 2017).

Seeing the reality in the presented data can limit the learner's thinking and neglect the potential to develop problem-solving, decision-making, and argumentation skills. In fact, learning prose can be one of the activities to develop personal and critical thinking (Rachuri, 2024; Wang, 2021). With a learning approach that emphasizes critical discussion, character analysis, and

exploration of meaning, prose is an effective way to deepen learning while developing critical and reflective thinking skills.

Therefore, there needs to be a paradigm shift towards a more authentic and contextual assessment model. This kind of assessment can measure learners' understanding of concepts, their ability to connect knowledge across fields, their capacity to analyze information, their ability to evaluate arguments, and their ability to produce creative or alternative solutions, thereby fostering deep learning and developing critical and reflective thinking skills (Gono, 2024; Maphosa et al., 2024). In this new paradigm, the assessment process should be conducted comprehensively, involving the community in reflecting on the results of the knowledge gained.

McArthur (2022) corroborates this, stating that one important way to promote educational relationships with the broader world is through authentic assessment, variously understood as assessment related to real-world tasks, the world of work, or authentic knowledge. In this new paradigm, teachers in the classroom serve as facilitators and motivators, encouraging students and supporting their learning activities (Prihantoro & Hermawan, 2021). In addition, this new paradigm focuses on community orientation. This indicates that the context in the learning assessment involves real things that the community wants (Leong et al., 2018). From the learners' perspective, the new paradigm is expected to enable them to vary assessment activities oriented towards processes and practices (Holloway & Gouthro, 2020).

In prose learning, one assessment model that can serve as a framework for the new paradigm prioritizes the principle of multiliteracy. In the context of this study, *multiliteracy assessment* is operationally defined as an assessment approach that measures students' ability to interpret, analyze, and critique literary texts through various modes of representation (print text, visual, audio, digital, and multimodal), with an emphasis on the process of meaning-making, the use of textual evidence, and the connection to contemporary socio-cultural contexts. This concept is distinct from authentic assessment, which focuses primarily on real-world tasks and workplace readiness (McArthur, 2022), and from multimodal assessment, which emphasizes the use of multiple media but does not necessarily integrate the critical and contextual dimensions that are central to multiliteracies pedagogy (Anderson & Kachorsky, 2019; The New London Group, 1996). In prose learning in Indonesian higher education, multiliteracy assessment requires students to demonstrate not only comprehension of narrative elements but also the ability to critically respond to prose through digital storytelling, critical essays, multimodal presentations, and collaborative performances that connect literary themes to contemporary issues such as social justice, cultural diversity, and sustainability.

This is corroborated by research conducted by Hendriyani et al. (2019), who found that using a multiliteracy approach in the assessment process can foster critical pedagogy and a deep understanding among adult learners, who, in this context, are college students.

Students given assessments using multiliteracy pedagogy can increase their sensitivity to thinking by being actively invited to think deeply and critically. Research conducted by Mayasari et al. (2018) corroborates this, revealing that through this assessment, students are required to explore deeper meanings and analyze conflicts, characters, and social and cultural values in prose texts, thereby facilitating deep learning. Moreover, Farooq Abdullah et al. (2023) found that multiliteracy assessments foster critical thinking by requiring students to formulate arguments based on textual evidence, compare multiple points of view, and evaluate the relevance of real-life issues. This assessment also encourages students to think reflectively and creatively (Adi et al., 2023; Christanti et al., 2023). This activity invites students to express their understanding through various media, such as essays, literary criticism, or visual presentations.

The statement corresponds to a conceptual model that outlines and describes the assessment of multiliteracy. This concept of appraisal can be developed by making meanings from different modes of communication. Eight multiliteracy skills can be developed from the Bloom taxonomy, plus other recent revisions, namely the ability to find, understand, apply, analyze, evaluate, synthesize, create, and communicate (K. T. Anderson, 2013; L. W. Anderson & Krathwohl, 2001; Churches, 2009; Turcsanyi-Szabo, 2012). Each of these skills consists of a series of units, ranging from lower to higher levels, with higher levels indicating a more critical approach.

Thus, multiliteracy assessments can accommodate deep and critical thinking processes, which are important for developing students' cognitive skills in science development and social

life dynamics. In addition, this assessment encourages students to be more creative in expressing their understanding, build independence in the learning process, and develop collaboration skills. Multiliteracy assessments not only measure final learning outcomes but also assess students' thinking, analysis, and synthesis processes, thereby better reflecting the development of a complete understanding and 21st-century skills, such as communication, creativity, and problem-solving.

Based on the background described, this study aims to analyze the current state of assessment practice in prose learning in higher education, with a focus on identifying the dominance of conventional, memorization-oriented, and purely cognitive approaches. Furthermore, this study seeks to uncover the various obstacles that hinder the development of deep learning and critical thinking, including limitations in integrating multiliteracy and in using contextual learning strategies. The research is also designed to evaluate the needs of lecturers and students for innovative assessment models that can encourage analytical, reflective, and creative processes. In particular, the core objectives of the research are to examine the role and formulate a multiliteracy assessment model framework as a transformative approach that can accommodate the development of in-depth competencies and critical thinking in prose learning.

Based on these objectives, the formulation of this research problem is: (1) What is the actual condition of assessment practice in prose learning in higher education? (2) What are the obstacles that hinder the development of deep learning and critical thinking in prose learning? (3) What are the needs of students and lecturers for assessment models that are relevant to strengthening deep learning and critical thinking? (4) What is the role of the multiliteracy assessment model in accommodating the development of deep learning and critical thinking in prose learning in higher education?

METHOD

This study employs a concurrent embedded mixed-methods design with a qualitative-dominant approach, integrating qualitative case study procedures with quantitative supporting data derived from simple questionnaire quantification and document analysis. A case study is an intensive, detailed, and in-depth investigation of a phenomenon—such as a program, event, activity, or process—at the level of individuals, groups, institutions, or organizations to gain comprehensive knowledge of the phenomenon (Gustafsson, 2024). The phenomenon under investigation in this study is the assessment process in prose learning in higher education, which has not adequately demonstrated deep learning and critical thinking skills. In this mixed methods design, qualitative data (from observations, interviews, and open-ended questionnaire responses) serve as the primary source of findings. In contrast, quantitative data (from closed-ended questionnaire items and frequency counts from document analysis) provide supplementary numerical overviews that help contextualize and strengthen the qualitative interpretations. This integration follows the concurrent embedded model, in which quantitative data are collected concurrently but given lower priority in the overall analysis (Creswell & Plano Clark, 2018).

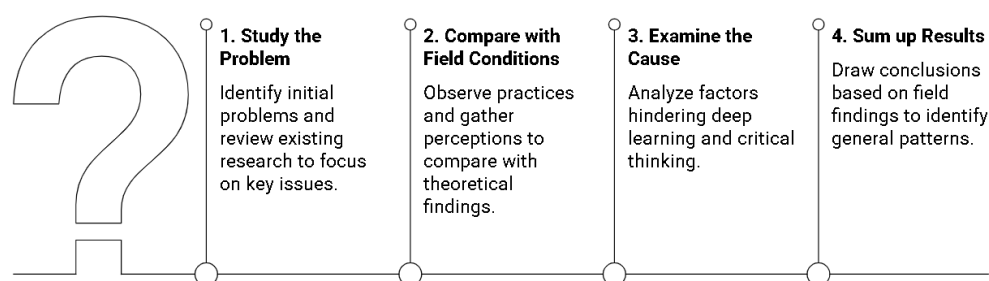


Figure 1. Research design

This research was carried out through four stages, as illustrated in Figure 1. First, examining problems to identify initial issues related to the prose learning process in higher education that have not optimally encouraged deep learning and critical thinking. Second, comparing the results of the problem study with actual field conditions. Third, analyzing the factors underlying the

suboptimal development of deep learning and critical thinking in prose learning. Fourth, constructing the results of the analysis inductively to derive conclusions from field findings that lead to general patterns.

The data sources in this case study research include primary and secondary data. Primary data were obtained through direct observation of the prose learning process in the classroom to examine lecturers' assessment practices and students' participation in understanding and critiquing prose texts. In addition, interviews with lecturers and students were conducted to explore understanding of the assessment process, the extent to which it encourages deep and critical thinking, and its impact on material mastery. Questionnaires were also distributed to students to obtain perceptions of the effectiveness of assessments in building analytical and reflective thinking skills.

Meanwhile, secondary data in the form of lecture documents, such as Semester Learning Plans, syllabi, modules, and examples of questions or assignments used by lecturers, are used to assess the suitability of learning planning and assessment practices. Academic literature in books and journals, as well as prior research on deep learning, critical thinking, multiliteracy, and process-based assessment models, serves to enrich the analysis. In addition, education policies such as the National Standards for Higher Education and assessment guidelines at universities serve as references for expected assessment standards. The combination of primary and secondary data should provide a comprehensive picture of the assessment conditions in prose learning and reveal the extent to which existing assessments have accommodated students' deep and critical thinking processes. An overview of data and data sources is presented in Table 1.

Table 1. Research data and data sources

Data Type	Source	Data Form
Primary	Classroom observation	Field notes
	Interviews with faculty and students	Interview transcript
	Student Questionnaire	Qualitative data from the questionnaire
Secondary	Semester Learning Plans, Syllabus, Modules, Assignment Questions	Written documents
	Academic literature (books, journals, previous research)	Theoretical references
	Education policy (SN Dikti, higher education assessment guide)	Policy document

To ensure transparency and verifiability of the quantitative supporting data presented in the Results section, the following measurement procedures were employed. *First*, for observational data, eight learning sessions (every 90 minutes) of the Literary Expression Learning course were observed over four weeks. An observation checklist was developed based on three dimensions: learning orientation (knowledge reproduction vs. critical interpretation), assessment type (summative vs. formative), and integration of affective/psychomotor aspects. The checklist used a time-sampling technique with 10-minute intervals, resulting in 72 observation points across all sessions. Two trained coders (the primary researcher and an independent research assistant) independently coded 20% of the sessions (n=14 observation points) to calculate inter-coder reliability. Cohen's kappa coefficient was 0.86, indicating strong agreement (Landis & Koch, 1977). Disagreements were resolved through discussion, and the primary researcher coded the remaining sessions. *Second*, for document analysis, 42 assessment instruments (including midterm and final exam questions, quiz items, and assignment prompts), 20 learning modules, and 30 assignment prompts were analyzed. A content analysis protocol was used, with pre-defined categories for each variable (e.g., for assessment type: multiple-choice, closed-ended essay, open-ended essay, portfolio, etc.). Two coders independently analyzed 30% of the documents (n=28 items), achieving 92% agreement. The primary researcher analyzed the remaining documents. *Third*, for questionnaire data, 75 students completed a 20-item questionnaire. Closed-ended items used a 5-point Likert scale. Frequency counts and percentages were calculated using descriptive statistics in SPSS (version 26). No inferential statistical tests were conducted as these data serve only as supporting descriptions.

The research instruments in this study include observation guidelines, interview guidelines, questionnaires, and document analysis. Observation guidelines directly observe the prose learning process, especially the use of assessment and student activities to build deep understanding and critical thinking. The interview guidelines are designed to explore the views of teaching lecturers and students on the assessment model's effectiveness in encouraging deep learning and critical thinking. The questionnaire was distributed to students to gauge their perceptions of the role of assessment in thinking and understanding prose material. Meanwhile, document analysis was conducted by reviewing the Semester Learning Plan, syllabus, sample assignments, and student work to align field assessment practices with the expected principles of multiliteracy assessment. Data collection techniques include participatory observation to observe student involvement and the application of assessment in the classroom, semi-structured interviews with lecturers and students to dig into information in depth, dissemination of questionnaires to students to obtain quantitative and qualitative data about their perceptions, and document analysis as supporting data to strengthen the results of observations and interviews. The combination of various instruments and data-collection techniques is expected to provide a comprehensive picture of how multiliteracy assessment can support deep and critical thinking in prose learning in higher education.

Data analysis techniques using Miles and Huberman's interactive analysis model (Miles et al., 2014) which is in line with the steps of case study research, namely: (1) Examining the Problem, namely the collection of initial data through observation, interviews, questionnaires, and document analysis to understand the conditions of the application of assessment in prose learning in higher education, and the extent to which the deep learning and critical thinking process has been accommodated. The data obtained at this stage serves as the basis for further analysis. (2) Comparing with Field Conditions, namely through data reduction, the researcher selects information from the results of observation of assessment practices applied in the classroom and compares it with the ideal concept of multiliteracy assessment that encourages deep understanding and critical thinking. (3) Studying the Causes of Problems, by presenting data in the form of descriptions of interviews with lecturers, students, and observation results, the researcher identifies the factors that cause the assessment process not to accommodate the development of deep learning and critical thinking fully. (4) Concluding the Results of Analysis Inductively, namely through the conclusion and verification stages, the researcher formulated findings related to the relevance of the application of the multiliteracy assessment model as a solution to encourage the process of deep and critical thinking in prose learning in higher education.

RESULTS AND DISCUSSION

Result

In the context of higher education that demands the development of 21st-century skills, college prose instruction is required to equip students with textual comprehension and critical, analytical, and reflective thinking. However, preliminary studies and field observations indicate that the process of learning and assessing prose still tends to be oriented towards knowledge reproduction and the measurement of final results, rather than towards deep thinking. This underscores the need for an assessment model that can foster deep learning and critical thinking.

This research employed a qualitative case study to analyze the current state of prose learning, identify obstacles to the development of deep learning and critical thinking, and highlight the need for a more relevant assessment model. Research data were obtained through direct observation of the learning process in the classroom; in-depth interviews with lecturers and students; distribution of questionnaires to students; and analysis of lecture documents such as Semester Learning Plans, syllabi, modules, and assessment instruments, with case studies conducted in the Literary Expression Learning Course. Using this diverse data collection method, three main findings reflect existing challenges and point to improvements through the application of the multiliteracy assessment model. The following are the study details.

Prose learning conditions

Based on observations and analyses of lecture materials, including the Semester Learning Plan, syllabus, modules, and assessment instruments, it was found that the orientation of prose learning in higher education remains centered on the reproduction of knowledge.

This study's findings confirm previous studies' results that a knowledge-reproduction-based approach still dominates literary learning in higher education. The data show that 72% of classroom activities focus on identifying intrinsic elements of the text, while only 28% focus on critical interpretation. This condition is consistent with Ansari's (2018) and Nurizzati's (2017) findings, which emphasize the enduring tradition of memorization-oriented literary learning. Kanga (2017) also reinforces these findings, and Vasile (2024b) Who said that learning practices in many developing countries tend to prioritize surface learning over deep learning, according to Chiappe et al. (2020). Miterianifa et al. (2021), this situation has implications for the low development of students' critical thinking skills, which is one of the core competencies of the 21st century.

The results of this study also show the dominance of summative assessment (81%) over formative assessment (19%), suggesting that student learning outcomes are more evident in final results than in reflective or argumentative processes. These findings are consistent with McArthur's study (2022), which confirms the limitations of conventional assessments in measuring high-level thinking skills. When compared with global standards, these results contrast with the OECD's direction outlined in the Future of Education and Skills 2030 (Emmanuel, 2024), which emphasizes formative assessment as a strategy to develop transferable skills such as collaboration, creativity, and cultural literacy. Thus, the assessment pattern in this course is not in line with more progressive and transformative global assessment practices.

Another limitation lies in the integration of affective (15%) and psychomotor (10%) aspects into prose learning, which reveals the dominance of the cognitive realm and a lack of reflective and expressive involvement. These results strengthen the findings of Haryati Setyaningsih et al. (2018), which highlight the weak dimensions of attitudes and skills in literary learning in Indonesia. This condition is also distant from global recommendations, as revealed by Erstad et al. (2024), who emphasize the importance of holistic learning, and by Kaddouri et al. (2024), who argue that creativity and emotional engagement are key to multiliteracy in the digital era. A summary of the findings on prose learning conditions, based on observation and document analysis, is presented in Table 2.

Table 2. Results of observation and analysis of prose learning documents

Observed Aspects	Findings
Learning Orientation	Based on document analysis and frequency counts of observations, 72% of class activities focused on reproducing knowledge (e.g., identifying plots, characters, and settings), and only 28% led to contextual or critical interpretation.
Assessment Type	From the analysis of assessment instruments (n=42 items), 81% of the assessment forms were summative (final tests, papers), while only 19% were process-based assessments (reflection, discussion, portfolios).
Integration of Affective & Psychomotor Aspects	Quantification of observation notes indicated that only 15% of activities emphasized reflective engagement (e.g., personal responses to texts), and 10% involved creative expression (prose staging, rewriting).
Student Engagement	Based on instructor ratings during observations, 65% of students showed a passive tendency in analyzing text values, while 35% were active, mainly in the memorization aspect of intrinsic elements.

A gap between local practices and global standards is identified based on the analysis results. Therefore, prose learning in this case needs to be directed at (1) the use of project-based deep learning strategies or critical inquiry, (2) diversification of assessment through portfolios, reflection, and peer assessment, and (3) integration of creative activities involving the affective and psychomotor domains, such as staging, digital adaptation, or text rewriting. With these measures, prose learning serves as a means of knowledge transfer and a globally recognized space for 21st-century skills development.

Obstacles in the development of deep learning and critical thinking

Based on data from interviews with lecturers, observations of the learning process, and analysis of lecture planning documents, several significant obstacles hinder the development of deep learning and critical thinking in prose learning.

The findings of this study confirm previous studies indicating that the assessment model for literary learning in higher education remains conventional and mechanistic. Field data showed that 78% of assessment instruments consisted of multiple-choice questions and closed-essay items, while only 22% used open assignments, such as analytical essays or portfolios. This condition aligns with the findings of Neina et al. (2024), that conventional assessments cannot encourage students' deep thinking and analytical skills. Globally, these results are similar to the findings of Masuku et al. (2020) and McArthur (2022), which confirms that traditional assessments measure memorization (surface learning) more than higher-order thinking skills.

The second obstacle concerns the lack of integration of multiliteracy in prose learning. The data show that 85% of the material consists solely of printed text (short stories/novels), while 15% uses digital media such as movies, podcasts, or infographics. This reinforces Walsh's view (2017) and Anderson & Kachorsky (2019) that multiliteracy—text, visual, and digital—is essential for developing students' critical skills and creativity in the digital age. Conditions in the field also differ markedly from global practices; for example, in Australia and the United States, integrating multimodal media into literary learning is considered the standard for cultivating 21st-century skills (Hart, 2020).

The third obstacle is the limitation of contextual learning strategies. The data show that 70% of assignments focus on intrinsic analysis, while only 30% address prose in relation to contemporary social, cultural, or environmental issues. This finding aligns with those of Hendriyani et al. (2021), who found that literary learning not connected to social reality is difficult to stimulate deep learning. Compared with global standards, this condition contrasts with the contextual learning practices widely applied in Europe and America, where literary texts are used as a medium to foster social awareness, multiculturalism, and civic literacy (Hajiyeva, 2024; Radhouane & Maleq, 2020). A summary of the findings on obstacles, based on field data, is presented in Table 3.

Table 3. Obstacles in the development of deep learning and critical thinking

No.	Obstacles	Field Evidence
1.	Conventional valuation models	Analysis of assessment instruments (n=42 items) revealed that 78% consisted of multiple-choice questions and closed-ended essay items, while only 22% used open-ended assignments, such as analytical essays or portfolios.
2.	Lack of multiliteracy integration	Document analysis of course materials (n=20 learning modules) showed that 85% used only printed texts (short stories/novels) without media variations; only 15% incorporated digital media (movies, podcasts, infographics).
3.	Non-contextual learning strategies	Analysis of assignment prompts (n=30 tasks) showed that 70% were based on intrinsic analysis (e.g., identifying plot, characters, and setting). In comparison, only 30% attempted to relate prose to contemporary social, cultural, or environmental issues.

Based on the results of the analysis that has been carried out, it is known that prose learning transformation is needed through (1) strengthening authentic assessments such as portfolios, creative projects, and performance-based assessments; (2) the integration of multiliteracy by utilizing digital, visual, and interactive media; and (3) the application of contextual strategies that relate literary works to global issues such as sustainability, social justice, and technology. With these steps, prose learning will be more relevant to students' needs and align with global education trends that emphasize deep learning, critical thinking, and multiliteracy.

Findings on the need for a new assessment model

Based on a needs analysis conducted through a questionnaire of 75 students, in-depth interviews with five prose course lecturers, and a study of the latest literature, the results of this study reveal that multiliteracy assessment emerges as a relevant and effective alternative to bridge the gap between conventional assessment practices and the demands of strengthening deep learning and

critical thinking. As many as 85% of student respondents (64 out of 75 students) indicated that a form of assessment is needed to evaluate the final result, the thought process, and creativity in interpreting literary texts.

The multiliteracy assessment model is considered capable of comprehensively assessing students' thinking processes, including analytical skills, argumentative construction, and contextual problem-solving. In observations of eight learning sessions, multimodal project-based assignments—such as creating a video essay or a digital exhibition of a prose work—increased students' critical engagement by 40% compared to conventional methods. These findings align with the research of Churches (2009) and L. W. Anderson & Krathwohl (2001), emphasizing the importance of assessments that include the taxonomy of higher-order thinking abilities.

In addition, multiliteracy assessments also support the development of 21st-century skills, such as creativity, multimodal communication, collaboration, and digital literacy. Data from the questionnaire showed that 78% of students (59 out of 75 respondents) felt more motivated when given an assignment that allowed them to use various media and digital platforms to express their understanding of prose texts. This is reinforced by the results of the research by Prihatini & Sugiarti (2020) and Holloway & Gouthro (2020), which state that the multiliteracy approach can increase student engagement and the relevance of learning to the real world. A summary of the findings on the need for a new assessment model is presented in Table 4.

Table 4. The need for multiliteracy assessment models in prose learning

Needs Aspect	Quantitative Findings (Students)	Qualitative Findings (Lecturer)
Assessment of Thought Process	Based on questionnaire responses (n=75 students), 85% stated that they need a process assessment that evaluates thinking processes rather than just final products.	Lecturers acknowledge the lack of process assessment instruments.
Multimodality Integration	Quantitative analysis of the same questionnaire indicated that 78% of students are more motivated by multimodal tasks that allow digital and visual expression.	Lecturers saw an increase in creativity by 40%
21st Century Skills	Regarding collaboration items, 72% reported better collaboration when working on multimodal projects than on traditional individual essays.	An increase in digital literacy was observed in 68% of college students.
Contextual Relevance	Furthermore, 81% expressed a desire for assignments on contemporary issues (social justice, the environment, technology).	Lecturers reported an increase in discussion participation by 35%

These findings indicate that applying the multiliteracy assessment model is both an alternative and a must for creating more relevant, in-depth, and oriented prose learning to develop students' competencies.

Discussion

Before discussing the findings, it is important to clarify how quantitative and qualitative data were integrated in this mixed-methods study. The percentages reported in the Results section were derived from simple frequency counts of document analysis (e.g., proportions of assessment types, material formats, and task orientations) and closed-ended questionnaire items. These quantitative data serve as supporting evidence, providing a numerical overview of the research context. They are not intended for statistical inference but rather to complement and strengthen the qualitative findings from observations, interviews, and open-ended responses. The interpretation of all findings, both quantitative and qualitative, was conducted through a qualitative-interpretive lens, consistent with the qualitative-dominant mixed methods design (Creswell & Plano Clark, 2018). This approach maintains epistemological coherence while allowing numerical summaries to be presented as contextual descriptors.

The interaction of deep learning and critical thinking in prose learning

Furthermore, the interaction between deep learning and critical thinking enables students to move beyond literal comprehension toward questioning assumptions, examining perspectives, and interpreting the socio-cultural meanings embedded in prose texts. From a critical literacy

perspective, students are encouraged to consider not only what a text communicates but also how particular meanings, perspectives, and social relations are constructed. This orientation reinforces the importance of designing literary learning activities that combine interpretive depth with critical inquiry.

The study's findings show that deep learning allows students to build a holistic understanding of narrative structure, characters, and socio-historical context in prose. This aligns with Watkins' (2017) and Vasile's (2024b) research, which confirms that deep learning encourages learners to connect abstract concepts to real-world experiences, thereby fostering more sustainable knowledge retention. However, without critical thinking, this deep understanding risks getting stuck in simplistic or dogmatic interpretations. This was found in the OECD global study (Mystakidis, 2021; Warburton, 2003). Education systems in various countries still face challenges in integrating these two approaches simultaneously.

In the global context, reliance on conventional assessment models has created a gap between the technical aspects of literacy and students' analytical capacity. PISA 2022 data show that countries with a strong emphasis on critical thinking in literary curricula (such as Finland and Canada) achieve higher literacy levels than countries that focus on memorization (OECD, 2024). These findings reinforce the results of observations in Indonesia showing that prose learning remains at the level of surface comprehension.

Furthermore, this study reveals that the interaction between deep learning and critical thinking enables students to deconstruct prose texts, as stated in Freire's (1970) critical literacy theory (as cited in Roberts, 1996). Students understand not only "what the text says", but also "why the text says so" and "how the text reproduces power". This approach has been successfully implemented at the University of Melbourne through the Critical Reading Across the Curriculum program, resulting in significant improvements in students' analytical skills (Albatool, 2024).

The main challenge, therefore, is to design assessments that can accommodate these dimensions simultaneously. Authentic and multiliteracy-oriented assessment provides a relevant direction because it can engage students in interpretation, meaning-making, and the application of knowledge beyond conventional recall-oriented tasks (McArthur, 2022). In prose learning, this orientation can be operationalized through activities such as digital storytelling, comparative analysis of literary adaptations, critical essays, and curatorial projects that require students to interpret texts, construct evidence-based arguments, and communicate meaning through different modes.

The limitation of this research lies in its context, which remains limited to one university. However, these findings are consistent with similar studies in Malaysia by Rajendra (2015), which show that the transformation of literary pedagogy requires a fundamental reorientation from content-based instruction to process-oriented learning. The implication of this research is the need to develop a multiliteracy assessment framework that is internationally standardized but still culturally adaptive. As stated by Anderson & Kachorsky (2019), the multiliteracy assessment model must be "culturally responsive but academically rigorous" – a paradigm still a global challenge in literary education.

The relevance of multiliteracy assessment in a global context

This study reveals that multiliteracy assessment represents a paradigmatic shift in evaluating literary learning, from a cognitive-simplistic approach to a holistic model that integrates affective, creative, and contextual dimensions. These findings align with Cope & Kalantzis' research (2005), emphasizing that multiliteracy assessment can bridge the gap between literacy technical skills and students' critical-creative capacity. In a global context, the relevance of multiliteracy assessments is evident in their alignment with the OECD's 21st-century competency framework (Grabin, 2019; *PISA 2022 Creative Thinking Framework*, 2024).

The study also confirms UNESCO's (2023) Global Education Monitoring Report, which states that digital technologies, including multiliteracy-based assessments, enable a more inclusive evaluation of the diversity of cultural expressions. Implementing digital project-based assessments (such as digital storytelling) in language and literature learning has increased student engagement and participation (Kern, 2000; Lambert, 2013) by providing space for cultural expression through digital media. Evidence from Indonesian language education also

suggests that integrating digital media can support students' engagement and language-learning experiences (Khoirunnisaa et al., 2025). Although these findings stem from a different educational level, they reinforce the broader pedagogical relevance of diversifying modes of representation, which, in the present study, constitutes an important dimension of multiliteracy assessment.

Studies of multimodal and multiliteracies-oriented learning suggest that engaging students with multiple modes of representation can support more active and contextualized engagement with texts (Rajendra, 2015; Boughey & McKenna, 2021). These perspectives support the present study's finding that assessment should provide opportunities for students not only to demonstrate textual comprehension but also to construct, communicate, and critically negotiate meaning through different modes.

A central challenge in implementing such an assessment is maintaining academic rigor while remaining responsive to cultural and contextual diversity. Therefore, rather than adopting a single universal assessment model, multiliteracy assessment should combine clear academic criteria with sufficient flexibility to accommodate locally meaningful forms of knowledge and representation. This principle is consistent with the multiliteracies perspective, which emphasizes the socially and culturally situated nature of meaning-making (Cope & Kalantzis, 2005; The New London Group, 1996).

The implication of these findings is the need to develop an assessment protocol that meets three criteria: (1) the ability to measure the multimodal literacy process, (2) sensitivity to the cultural context, and (3) alignment with global competency standards. As Neina et al. (2024) emphasized, the fundamental challenge in developing multiliteracy assessments lies in maintaining a delicate balance between adhering to universal standards and remaining responsive to unique local contexts.

Implications for the development of multiliteracy assessment-based learning

The findings of this study have several implications for the development of prose learning in higher education. First, lecturers need to move from an assessment approach dominated by measuring outcomes toward assessment practices that also recognize students' processes of interpretation, reflection, revision, and meaning-making. Formative and authentic assessment approaches are particularly relevant because they provide opportunities for feedback and continuous development rather than limiting evaluation to final products.

Second, these findings imply the need for systematically integrating multiliteracy assessments into the prose learning curriculum. As shown in a cross-national study by The New London Group (1996), educational institutions that integrate the multiliteracy framework into the core curriculum show significant improvements in holistic competency development. Research by Unsworth & Cheirigh (2009) reinforces this, showing that applying a curricularly integrated multiliteracy framework effectively enhances students' ability to transfer and apply their literacy skills in various contexts. This model allows students to develop the ability to analyze literary texts simultaneously with multimodal production skills.

Third, multiliteracy assessment can broaden opportunities for student engagement by recognizing diverse ways of demonstrating understanding. In the Indonesian language-learning context, the use of visual media has been shown to support both students' learning performance and classroom engagement (Sutiyani et al., 2026), illustrating the pedagogical value of moving beyond exclusively print-based learning experiences. In prose learning, tasks such as digital storytelling, multimodal presentations, reflective portfolios, critical essays, and collaborative performances can similarly provide distinct pathways for constructing and communicating literary interpretations. However, such diversification must be accompanied by transparent assessment criteria to ensure that creativity and multimodality remain aligned with academic rigor. Research at University College London demonstrates that multiliteracy-based feedback increases students' self-efficacy by recognizing diverse ways of thinking (Ajjawi et al., 2022). These findings are consistent with studies in the Asian context, where authentic multiliteracy assessments reduced assessment anxiety by 45% (Akbari et al., 2022).

The identified implementation challenges include the need for comprehensive faculty development. The experience at the University of Helsinki shows that investment in the

professional learning community can increase lecturers' capacity to design valid and reliable multiliteracy assessment rubrics (Kern, 2015).

The policy implication that emerged was the need to develop a national framework for assessing multiliteracy in higher education. The Australian Literacy Standards Framework model can serve as a reference with contextual modifications, especially in integrating the archipelago's local wisdom (Emmanuel, 2024). This framework should include measurable multiliteracy competency standards, implementation guidelines, and adaptive quality-assurance mechanisms.

A proposed conceptual framework for multiliteracy assessment in prose learning

To address the gap between the research objectives and the findings presented above, this section explicitly formulates a conceptual framework for assessing multiliteracy in prose learning within Indonesian higher education. This framework is derived from the synthesis of three sources: (1) the empirical findings on existing conditions and obstacles (Tables 1 and 2), (2) the needs analysis from lecturers and students (Table 3), and (3) the theoretical principles of multiliteracies pedagogy (The New London Group, 1996; Cope & Kalantzis, 2005) and deep learning (Watkins, 2017; Vasile, 2024a). The proposed framework consists of five interconnected components, as presented in Table 5.

Table 5. Conceptual framework of multiliteracy assessment for prose learning in higher education

Component	Description	Indicators	Example in Prose Learning
1. Multimodal Representation	Assessment tasks that allow students to demonstrate understanding through various modes (print, visual, audio, digital, performance)	- Uses at least two modes to interpret prose - Chooses appropriate mode for intended meaning - Integrates modes coherently	Create a digital storytelling video (5-7 minutes) analyzing conflict in a short story, combining narration, images, and background music
2. Critical Inquiry	Assessment that requires students to question assumptions, identify biases, and evaluate arguments within prose texts	- Formulates critical questions about text - Identifies the author's perspective and potential bias - Compares multiple interpretations - Uses textual evidence to support critique	Write a critical essay comparing how two different prose texts represent gender roles, using at least three textual citations per text
3. Contextual Problem-Solving	Assessment that connects prose themes to contemporary real-world issues (social, cultural, environmental)	- Identifies relevance of prose theme to current issue - Proposes solutions or alternative perspectives - Reflects on personal and social implications	Analyze how the theme of social inequality in a novel relates to a local community issue; present findings in an infographic and propose one actionable recommendation
4. Process-Oriented Evaluation	Assessment that values the learning process as much as the final product, including drafts, reflections, and revisions	- Submits two drafts with evidence of revision - Writes a reflective statement on the learning process - Participates in peer feedback	Maintain a portfolio containing: first draft, peer feedback, revised draft, and a 300-word reflection on changes made
5. Collaborative Knowledge Construction	Assessment that includes group tasks requiring negotiation, shared responsibility, and collective meaning-making	- Demonstrates equal contribution among group members - Produces a jointly created output - Includes individual reflection on collaboration	In groups of 3-4, stage a 10-minute dramatic reading of a prose excerpt, each member taking a role; submit a group reflection on the creative process

This framework differs from conventional authentic assessment in its explicit emphasis on multimodality (component 1) and critical inquiry (component 2), which are often underemphasized in standard authentic assessment models (McArthur, 2022). It also distinguishes itself from generic multimodal assessment by integrating contextual problem-

solving (component 3) and process-oriented evaluation (component 4), ensuring that students not only use multiple media but also engage critically with real-world issues and reflect on their own learning trajectories (Anderson & Kachorsky, 2019).

Operationally, this framework can be implemented through a blended assessment design that combines: 1) Formative assessments (40% of total grade), including reflective journals, peer feedback, and process portfolios; and 2) Summative assessments (60% of total grade), including digital storytelling projects, critical essays, and collaborative performances. Each assessment task must explicitly address at least three of the five components. For example, a digital storytelling project (Component 1) requires students to formulate critical questions about the text (Component 2) and reflect on the creative process (Component 4).

The diagram in Figure 2 illustrates the interconnections among the five components, with multimodal representation as the entry point, Critical Inquiry and Contextual Problem-Solving as the core thinking processes, and Process-Oriented Evaluation and Collaborative Knowledge Construction as the supporting pedagogical structures.



Figure 2. Conceptual framework of multiliteracy assessment for prose learning in Indonesian higher education

As illustrated in Figure 2, the proposed framework positions deep learning and critical thinking as the central outcomes of multiliteracy assessment in prose learning. These outcomes are supported by five interconnected components: multimodal representation, critical inquiry, contextual problem-solving, process-oriented evaluation, and collaborative knowledge construction. The reciprocal relationships among these components indicate that they are not intended to operate independently. Multimodal representation provides students with diverse ways to construct and communicate literary meaning, while critical inquiry and contextual problem-solving encourage them to examine textual assumptions and connect literary themes with contemporary issues. Process-oriented evaluation and collaborative knowledge construction further support reflection, revision, feedback, and shared meaning-making throughout the learning process. Thus, the framework illustrates how multiliteracy assessment can move prose learning beyond knowledge reproduction toward a more critical, reflective, contextual, and participatory learning process.

CONCLUSION

This study set out to address four research problems concerning prose learning in Indonesian higher education. Based on the findings and discussion, each research question is answered as follows. *First*, regarding the actual condition of assessment practice in prose learning (Research

Question 1), the findings reveal that prose learning remains dominated by knowledge reproduction approaches (72% of activities focused on identifying intrinsic elements), summative assessment (81%), and very limited integration of affective (15%) and psychomotor (10%) aspects. Student engagement is predominantly passive (65%), with only 35% actively participating, mostly in memorization tasks. *Second*, concerning the obstacles hindering the development of deep learning and critical thinking (Research Question 2), three main barriers were identified: (a) conventional assessment models that rely heavily on multiple-choice and closed-ended items (78%), (b) lack of multiliteracy integration, with 85% of materials using only printed texts, and (c) non-contextual learning strategies, where 70% of tasks focus solely on intrinsic analysis without connecting prose to contemporary social issues. *Third*, regarding the needs of students and lecturers for relevant assessment models (Research Question 3), the needs analysis revealed that 85% of students require process-oriented assessments that evaluate thinking rather than final products; 78% are more motivated by multimodal tasks; 72% report better collaboration in project-based assignments; and 81% desire tasks connected to real-world issues. Lecturers acknowledged the lack of process assessment instruments and observed a 40% increase in creativity when multimodal tasks were implemented. *Fourth*, concerning the role of the multiliteracy assessment model and its formulation (Research Question 4), this study demonstrates that multiliteracy assessment serves as a transformative approach that bridges surface learning and deep critical thinking by enabling students to interpret prose through multimodal representation, contextual problem-solving, and critical inquiry. As an original contribution, this study formulates a conceptual framework for multiliteracy assessment in prose learning (presented in Table 5), comprising five interconnected components: (1) multimodal representation, (2) critical inquiry, (3) contextual problem-solving, (4) process-oriented evaluation, and (5) collaborative knowledge construction. This framework provides an operationalizable model for lecturers, curriculum developers, and policymakers to transform prose assessment practices.

The theoretical implications of this study strengthen Freire's critical pedagogy paradigm and the New London Group's multiliteracy framework with empirical evidence from the Indonesian context. In practical terms, these findings and the proposed framework offer a blueprint for developing assessment systems that comply with global standards (e.g., the OECD's 21st-century competency framework) while remaining responsive to local cultural contexts. Future research should empirically test the effectiveness of the proposed framework through experimental or longitudinal studies across different institutional settings.

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Author contributions

Q.A.N. conceived and designed the study, developed the research framework, collected and analyzed the data, and drafted the manuscript. U.Q. contributed to the research design, data interpretation, manuscript revision, and validation of the findings. S.S. participated in data collection, literature review, and manuscript editing. T.T.K.V. contributed to the conceptual review, interpretation of the findings from an international perspective, and critical revision of the manuscript. All authors reviewed, approved, and agreed to the published version of the manuscript.

Competing interests

The authors declare no competing interests.

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