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Designing LANSKARA: A Digital Learning Module Grounded in South Sumatran Landscapes for Creative Writing Instruction

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Abstract:

Creative writing instruction for pre service Indonesian language teachers faces a persistent gap between students' digital readiness and their mastery of genre specific writing conventions, a gap made more urgent by evidence that generative artificial intelligence tends to homogenize collective creative output (Doshi & Hauser, 2024). This study reports the diagnostic stage of developing LANSKARA (Lanskap Sumatra Selatan dalam Aksara), a web based digital module that anchors six creative writing genres in five South Sumatran landscapes, namely the Musi River, the Ogan Ilir wetlands, Meranjat Forest, Kemaro Island, and Ampera Bridge. Following the three phase Alessi and Trollip research and development model (Burhan et al., 2024), data were gathered through a needs analysis questionnaire completed by 46 Menulis Kreatif students and a diagnostic pretest completed by 68 students. The questionnaire showed strong readiness for digital instruction and near universal demand for landscape based stories, guided writing practice, a real time writing convention assistant, and a searchable glossary of local terms, each endorsed by more than ninety percent of respondents. The pretest produced an overall class accuracy of only 45 percent, with the weakest performance found in point of view conventions, poetic imagery, drama script formatting, and treating landscape as a meaningful narrative setting. Notably, only 17 percent of students reported experiencing obstacles in creative writing, revealing a mismatch between perceived and demonstrated competence. These findings provide empirical grounds for LANSKARA's content structure and its embedded formative feedback features, and they support place based digital storytelling as a counterweight to AI driven content homogenization.

Keywords: Digital Learning Module; Creative Writing; Place Based Pedagogy; South Sumatra Landscape; Ecological Literacy

Introduction

Creative writing courses in Indonesian teacher education programs are expected to prepare pre service teachers who can both produce and later teach literary texts across a range of genres. In practice, however, students enrolled in the Menulis Kreatif course at the Indonesian Language and Literature Education Program of Universitas Sriwijaya frequently report difficulty generating ideas, sustaining a coherent plot, and applying genre appropriate conventions, while their engagement with the ecological and cultural wisdom of their own home region, South Sumatra, remains comparatively low. This condition sits inside a broader concern in current writing research. Recent large scale experiments show that generative artificial intelligence, while it can raise an individual writer's fluency, tends to compress the diversity of collective creative output and to pull written expression toward dominant, often Western, stylistic norms (Doshi & Hauser, 2024; Agarwal, Naaman, & Vashistha, 2025). When students increasingly turn to such tools for inspiration, a writing pedagogy that offers only generic prompts risks reinforcing the very homogenization these studies warn against, and it also risks eroding students' capacity to notice and narrate the specific, textured details of the landscapes and cultural practices around them.

These two problems, weak genre literacy and thin engagement with local ecological cultural material, are not new to the research team. Earlier community service work led by the present authors has repeatedly shown that when creative writing training is anchored in local wisdom and supported by carefully designed digital or artificial intelligence assisted materials, participants respond with stronger motivation and clearer improvement, whether the target group is secondary school teachers building ecopedagogy based teaching materials (Alwi, Ernalida, Syarifudin, Nuzula, & Ariska, 2025), secondary school students strengthening literacy through an artificial intelligence assisted, ecopedagogy based e module (Alwi, Ernalida, Nuzula, Gunaika, Salsabila, & Aulia, 2026), or junior high school students learning creative writing through locally rooted interactive slides in Ogan Ilir (Nuzula, Syaripudin, Turama, Gunaika, Siwi, & Sholikhah, 2026). What has not yet been tested is whether the same principle, pairing digital scaffolding with local landscape content, can be formalized into a structured, higher education level module for university students who are themselves training to teach Indonesian language and literature. LANSKARA, short for Lanskap Sumatra Selatan dalam Aksara, is designed to close this gap. It is conceived as a web based digital module that treats five South Sumatran landscapes, the Musi River, the Ogan Ilir wetlands, Meranjat Forest, Kemaro Island, and Ampera Bridge, as narrative anchors for six creative writing genres, namely biography, autobiography, short story, poetry, drama script, and folklore or legend.

The urgency of this development is strengthened by policy and institutional context. Higher education in Indonesia is under continuing pressure to integrate digital transformation into everyday instruction, and language education programs in particular are expected to model culturally responsive, technology supported pedagogy for their graduates, most of whom will later teach in schools that face the same pressure. A module that is only digital, without a strong conceptual anchor, would not resolve the homogenization risk described above. A module that celebrates local landscape without functional digital scaffolding would in turn struggle to meet students' documented expectations for accessible, feedback rich learning tools, expectations that this study measures directly. LANSKARA therefore combines three pillars that were proposed in the conceptual phase of this research program, ecological consciousness that trains students to read landscapes as living cultural texts, multimodal digital storytelling that uses text,

image, audio, and interactive elements as media for narrative production, and place based pedagogy that positions real, local landscapes as the starting point for creative exploration rather than as decorative background.

This paper reports the diagnostic stage of the LANSKARA project, conducted under the planning phase of the Alessi and Trollip research and development model (Burhan, Pattaufi, Nurhikmah, Febriati, Hakim, Anwar, & Wahira, 2024), a three phase instructional design framework consisting of planning, design, and development that is widely adopted for digital learning media in Indonesian higher education. Before any interface or content decision is finalized, the design team gathered two complementary sets of empirical data from the Menulis Kreatif student cohort, a needs analysis questionnaire that captures students' digital readiness, their familiarity with South Sumatran landscapes and vocabulary, their interest in each target genre, and their expectations for module features, and a diagnostic pretest that measures their existing command of the six genres and of standard Indonesian writing conventions. Grounding the design phase in this evidence, rather than in assumption, is intended to ensure that LANSKARA addresses the difficulties students actually experience and builds on the readiness they already possess. Accordingly, this study addresses three questions, first, what digital readiness and learning needs do Menulis Kreatif students report, second, what is their baseline creative writing competence across the six target genres, and third, how do these findings inform the content structure and feature design of LANSKARA. Beyond its immediate contribution to module design, this paper is intended to add an empirically grounded case to the still limited literature on place based digital writing pedagogy as a response to the homogenizing pressure of generative artificial intelligence in higher education writing instruction.

Methods

This study applies a research and development design following the three phase model proposed by Alessi and Trollip and summarized in recent instructional media research as planning, design, and development (Burhan et al., 2024). The findings reported here belong to the planning phase, in which the design team collected diagnostic data before determining LANSKARA's final content structure and feature set. Participants were students enrolled in the Menulis Kreatif course at the Indralaya campus of the Indonesian Language and Literature Education Program, Universitas Sriwijaya. Two data sets were collected from this cohort using convenience sampling, a needs analysis questionnaire completed by 46 students and a diagnostic pretest completed by 68 students.

The needs analysis questionnaire consisted of 21 closed statements rated on a four point Likert scale ranging from strongly disagree to strongly agree, together with two open ended items asking students to describe their biggest difficulty in creative writing and their expectations for LANSKARA's development. The closed items covered four thematic areas, digital learning readiness, familiarity with South Sumatran landscapes and local vocabulary, interest in each of the six target genres, and expected module features. The questionnaire was distributed through an online form. The diagnostic pretest consisted of 20 multiple choice items with five answer options, covering the structural and conventional knowledge of biography, autobiography, short story, poetry, drama script, and folklore or legend, together with two items on standard Indonesian writing conventions and one item on treating landscape as a narrative setting. The pretest was administered through a gamified quiz platform that automatically recorded per item accuracy and per participant accuracy.

Data were analyzed descriptively and quantitatively. For the questionnaire, mean scores and percentage of agreement, defined as the proportion of respondents selecting agree or strongly agree, were calculated for each item and grouped by thematic category. For the pretest, accuracy percentages were calculated for each item and then aggregated by genre or convention category to identify relative strengths and weaknesses, and participant level accuracy was summarized into a distribution of competence categories. Open ended responses were analyzed thematically by grouping recurring terms and ideas into categories describing common difficulties and common expectations. The combined quantitative and thematic results were then used to identify the design implications discussed in the following section.

Results and Discussion

Digital Readiness and Learning Needs

Table 1 summarizes the most decisive results of the needs analysis questionnaire completed by 46 Menulis Kreatif students. Digital readiness is high across the board, students overwhelmingly report owning an adequate device and having stable internet access, and most have prior experience with an e module or digital learning medium. Ecological cultural literacy shows a more uneven pattern, only 65.2 percent of students agree that they are well acquainted with South Sumatran landscapes, yet 95.7 percent are interested in using local landscape and culture as a source of writing ideas, and 82.6 percent already understand most local vocabulary. This pattern indicates that interest in local material clearly outpaces current familiarity, which is precisely the gap a curated, module based landscape inventory is meant to close.

Table 1. Summary of Needs Analysis Results

No.	Aspect	Representative Indicator	Mean (scale 1 to 4)	Agreement
1.	Digital readiness	Students own an adequate smartphone or laptop for digital learning	3.59	97.8%
2.	Digital readiness	Students have stable internet access to web based materials	3.35	93.5%
3.	Digital readiness	Students have previously used an e module or digital learning medium	3.07	78.3%
4.	Ecological cultural literacy	Students are well acquainted with South Sumatran landscapes	2.76	65.2%
5.	Ecological cultural literacy	Students understand most local South Sumatran vocabulary	2.93	82.6%
6.	Ecological cultural literacy	Students are interested in landscape and local culture as a source of writing ideas	3.26	95.7%

No.	Aspect	Representative Indicator	Mean (scale 1 to 4)	Agreement
7.	Feature need	Students need landscape stories accompanied by photographs and audio	3.48	97.8%
8.	Feature need	Students need a real time assistant that checks writing conventions	3.52	97.8%
9.	Feature need	Students need a searchable glossary of local terms	3.54	100%
10.	Feature need	Students need fast feedback or assessment from the lecturer	3.61	97.8%

Source: LANSKARA needs analysis questionnaire, 2026 (N = 46)

Interest across the six target genres is consistently strong, ranging from 84.8 percent for biography and autobiography to 95.7 percent for folklore or legend and 93.5 percent for short story, confirming that all six genres retained in the module design remain relevant to students. Feature related items produced the clearest consensus in the entire questionnaire, between 97.8 and 100 percent of students agree that they need landscape stories supported by photographs and audio, a dedicated space to practice writing techniques, a real time writing convention assistant, a searchable local term glossary, and fast feedback from the lecturer. Each of these five expectations corresponds directly to a feature already built into the LANSKARA prototype, which strengthens the case that the current design direction is aligned with documented student need rather than designer assumption.

One item produces a result that deserves particular attention. Only 17.4 percent of students agree that they experience obstacles in creative writing, a mean of 1.98 on the four point scale, the lowest of all 21 items. Read together with the pretest results discussed next, this low self reported obstacle rate reveals a mismatch between students' perceived competence and their demonstrated competence, a finding that carries direct implications for module design and is discussed further in the Analysis subsection.

Baseline Creative Writing Competence

Table 2 presents the diagnostic pretest results from 68 students, aggregated by genre and by writing convention category. The overall class accuracy was 45 percent, and the distribution across the four accuracy bands shows that 28 students, or 41 percent of the cohort, scored at or below 40 percent, 30 students scored between 41 and 60 percent, and only 10 students scored above 60 percent, with the single highest individual score reaching 85 percent.

Table 2. Diagnostic Pretest Accuracy by Genre and Writing Convention

No.	Genre or Convention	Item Numbers	Mean Accuracy
1.	Biography and autobiography	1 to 5	50.2%
2.	Short story (cerpen)	6 to 9	40.3%
3.	Poetry	10 to 12	39.3%
4.	Drama script	13 to 15	30.3%
5.	Folklore and legend	16 to 17	86.5%

No.	Genre or Convention	Item Numbers	Mean Accuracy
6.	Standard Indonesian writing conventions (EYD)	18 to 19	37.5%
7.	Landscape as narrative setting	20	32.0%
8.	Overall class accuracy (68 participants)	1 to 20	45.0%

Source: LANSKARA diagnostic pretest, 2026 (N = 68)

Genre level results show a wide range. Students perform strongest on folklore and legend, reaching 86.5 percent accuracy, most likely because these forms are encountered informally from childhood and rely less on formal literary terminology. Performance is markedly weaker on biography and autobiography, 50.2 percent, short story, 40.3 percent, and poetry, 39.3 percent, and it is weakest of all on drama script, 30.3 percent. The single lowest scoring item in the entire pretest, at only 10 percent accuracy, asked students to identify the point of view convention typically used in biography writing, and an equally low score, also 10 percent, was recorded for identifying stage directions in a drama script. Standard Indonesian writing conventions fare little better, at 37.5 percent, and the item that asked students to treat landscape as a meaningful element of setting rather than a decorative backdrop scored only 32 percent, the lowest of the seven aggregated categories after drama script.

Students' Difficulties and Expectations

Thematic analysis of the two open ended items reinforces the quantitative pattern. When asked to describe their greatest difficulty in creative writing, students most frequently mentioned generating and developing ideas, determining plot and maintaining a coherent story line, choosing precise vocabulary, and applying correct spelling and writing conventions. Several students described a specific and recognizable experience, having an idea in mind but losing it the moment they tried to put it into words. Very few students indicated that they had no difficulty at all. When asked about their expectations for LANSKARA, the most common responses centered on accessibility outside class hours, a simple and easy to understand presentation, features that support consistent practice, and a hope that the module could eventually benefit a wider audience beyond the Menulis Kreatif course itself, extending its reach as a shared learning resource for the wider student community.

LANSKARA Prototype

The diagnostic findings above were used to refine the LANSKARA prototype currently under development. The prototype interface presents each of the six genres with characteristics, structure, writing tips, and worked examples, together with slide format narrative content for all five landscapes, an interactive three word writing laboratory with a timer, a rule based writing convention assistant covering standard word choice and prefix spacing, genre specific checklists, and a submission workflow that routes finished student work to a lecturer managed archive by genre.



Figure 1. LANSKARA genre material page and writing convention assistant

Analysis

Three findings from this diagnostic stage carry direct design consequences for LANSKARA. First, the gap between the 17.4 percent of students who reported experiencing writing obstacles and the 45 percent overall pretest accuracy indicates that students underestimate the technical demands of genre specific writing. A module that relies only on self assessment would therefore risk leaving this gap unaddressed, which is why LANSKARA embeds an automated, rule based convention checker and structured genre checklists rather than depending solely on student self report, giving every learner an objective, formative signal about their own writing regardless of how confident they already feel.

Second, the combination of high interest in landscape based writing, 95.7 percent, with only moderate familiarity with the landscapes themselves, 65.2 percent, and with the very low 32 percent accuracy on treating landscape as a meaningful setting, together validate the core design decision behind LANSKARA, namely to supply a curated, richly illustrated narrative inventory of all five landscapes rather than assuming students already possess this ecological cultural knowledge. This design choice also connects the module back to the wider concern raised in the introduction, if students can be guided to notice and narrate specific, place grounded ecological detail, drawn from the Musi River, the Ogan Ilir wetlands, Meranjat Forest, Kemaro Island, and Ampera Bridge, their writing gains a texture and specificity that a general purpose generative model, trained on broad and homogenized data, is unlikely to reproduce on its own (compare Doshi & Hauser, 2024; Agarwal, Naaman, & Vashistha, 2025). In this sense, LANSKARA's place based approach functions as a pedagogical response to, rather than merely a stylistic alternative to, the collective homogenization risk documented in recent generative artificial intelligence research, a link consistent with the broader eco digital storytelling framework this research program set out to test.

Third, the genre level pretest results suggest a practical sequencing implication for the module rather than for its content list, which remains fixed at six genres. Because folklore and legend already show high baseline competence, 86.5 percent, this genre is well suited to serve as an accessible entry point that builds student confidence before they move to the more technically demanding genres, particularly drama script and poetry, where accuracy fell below 40 percent and where LANSKARA's checklists and worked

examples need to carry the heaviest instructional weight. These findings also resonate with earlier community based training conducted by the present author team, in which locally grounded, digitally supported writing activities consistently produced stronger engagement than generic instruction (Nuzula et al., 2026; Alwi et al., 2026), lending further support to treating place based digital storytelling, implemented through multimodal media such as text, image, and audio (Munajah, Sumantri, & Yufiarti, 2023; Putri & Nuzula, 2025), as a viable and evidence grounded approach for higher education creative writing instruction.

Conclusion

This study reports the diagnostic planning stage of LANSKARA, a digital creative writing module that anchors six genres in five South Sumatran landscapes. A needs analysis questionnaire completed by 46 students shows strong digital readiness and near universal demand for landscape based stories, guided practice, a real time writing convention assistant, a searchable glossary, and fast lecturer feedback, all endorsed by more than ninety percent of respondents. A diagnostic pretest completed by 68 students shows an overall class accuracy of only 45 percent, with particular weakness in point of view convention, poetic imagery, drama script formatting, standard writing conventions, and the treatment of landscape as narrative setting, while folklore and legend already stand out as an area of comparative strength.

Read together, these two data sets confirm both the readiness and the gap that justify LANSKARA's continued development. Students are digitally prepared and motivated to write about their own landscapes, yet they are not yet equipped with the technical genre knowledge to do so with confidence, and they consistently underestimate this gap when asked to self assess. These findings directly inform the design phase of the Alessi and Trollip research and development model that guides this project, in particular the decision to embed formative, rule based feedback rather than relying on self report, to foreground a curated landscape narrative inventory rather than assuming prior ecological familiarity, and to sequence genre content from folklore toward the more technically demanding forms of drama script and poetry.

Beyond its immediate design function, this study contributes an empirically grounded case for place based digital storytelling as a response to the documented tendency of generative artificial intelligence to homogenize collective creative output. By grounding student writing in the specific, textured detail of local landscapes, an approach a general purpose generative system is unlikely to reproduce on its own, LANSKARA offers a concrete pedagogical pathway for preserving the diversity of student voice in an increasingly artificial intelligence saturated writing environment. The next stage of this research will move into the design and development phases of the Alessi and Trollip model, including alpha validation by three expert panels covering material, media, and cultural ecological criteria, before the module proceeds toward limited classroom trial and, ultimately, toward its intended contribution as a peer reviewed publication and a copyright registered open educational resource for Indonesian language teacher education.

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