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Augmented Reality-Based Psycholiterary Learning: Enhancing Emotional and Narrative Literacy in Higher Education

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ABSTRACT

This study investigates the effectiveness of Augmented Reality (AR) in enhancing university students' emotional literacy through literary psychology education. Using a mixed-methods sequential explanatory approach, the research combined a quasi-experiment and thematic interviews to assess both the impact and the lived experience of using the ARPS application. Quantitative findings indicate a significant improvement in emotional literacy scores for the experimental group ($p < 0.001$), with a very large effect size (Cohen's $d = 2.78$) and a positive correlation between AR usage duration and literacy gains ($r = 0.71$). The application also received a System Usability Scale (SUS) score of 82/100, categorized as "Excellent." Qualitative insights reveal that AR-based interaction—through 3D visualization, emotional audio, and gesture control—facilitated deeply affective and reflective learning experiences. The study highlights AR as more than a visual medium; it acts as a pedagogical technology that bridges emotional engagement and narrative understanding. These findings suggest strong potential for AR to reshape emotional literacy instruction across disciplines and inform the development of empathy-driven educational technologies. To date, this is one of the first studies to operationalize affective computing and narrative-based AR in the context of humanities education.

KEYWORDS: augmented reality, narrative psychology, emotional engagement, educational technology, human-computer interaction

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1. Introduction

In higher education, literary learning is often stuck in a dominant cognitive format—emphasizing structural, plot, and rhetorical analysis, but neglecting to touch on the emotional and affective dimensions of the text (Chin & Wu, 2025; Lee et al., 2024). Students often only become passive readers, without being deeply involved with the psychological conflicts or inner dynamics of the characters presented (Arango-Caro et al., 2025; Chiang et al., 2025). This condition raises concerns about the erosion of emotional literacy, namely the ability to understand, feel, and interpret the complexity of human affection through literary texts (Arici, 2024; Rakhimzhanova, Issabayeva & Aktolkyn, 2025; Vahabzadeh et al., 2018). In fact, these skills are crucial in shaping empathy, social intelligence, and reflective awareness—globally recognized competencies within *the framework of UNESCO Education for Sustainable Development* (SDG 4.7). Literature should not only be understood as an object of analysis, but as a space for intense and reflective emotional training. For this reason, a pedagogical approach that is able to bridge literary texts with students' affective experiences is an urgent need (Akinradewo et al., 2024; Maas & Hughes, 2020; Mukhtarkyzy et al., 2023).

Meanwhile, Augmented Reality (AR) Technology offers transformative solutions (Akçayır & Akçayır, 2017; Rakhimzhanova, Issabayeva & Aktolkyn, 2025; Rakhimzhanova, Issabayeva, Kultan et al., 2025). By projecting narrative elements into real space through 3D visualization, spatial audio, and gestural interactions, AR opens up opportunities to present literary texts as multisensory experiences (Cabero-Almenara et al., 2019; DÍAZ-NOGUERA et al., 2020; Romano et al., 2023; Wei et al., 2025). In the context of literary psychology, this approach not only strengthens the understanding of the plot or character, but also activates *embodied cognition*—where students experience simultaneous physical and emotional involvement. However, most AR research in education is still focused on STEM or visual arts (Suwadi et al., 2024; Zhao, 2018). The humanities, especially literary psychology, are relatively neglected in the development of educational AR models. Research that explicitly integrates narrative theory (e.g., Bruner or Green & Brock) with user experience (UX) design in a literary context is almost non-existent in the current literature (Rizki et al., 2025; Zhang et al., 2025). In fact, this is where AR's unique potential can be maximized: not just as a technical tool, but as a medium *of emotional transport* into narrative space (Srivastava et al., 2023; Vahabzadeh et al., 2018).

In the dynamics of literary learning in the digital era, Augmented Reality (AR) technology offers new potential to transform the learning experience from passive to interactive and affective (Ghosh et al., 2025; Guo et al., 2025; Mills et al., 2025). However, the adoption of AR in the context of humanities education—especially literary psychology—still faces conceptual and empirical challenges. It requires a deep understanding of how these technologies can be precisely designed, as well as the extent to which they impact the emotional and narrative aspects of learning (Akçayır & Akçayır, 2017; Chamola et al., 2025; Di Fuccio et al., 2024; Hosni et al., 2025). Based on this urgency, this study is designed to answer the following three main questions:

1. How to design and implement a prototype of an Augmented Reality application that is in harmony with the principles of literary psychology and affective cognition?
2. How does the use of AR affect the improvement of students' emotional and narrative literacy in the context of learning literary psychology?
3. What is the experience of students in interacting with visual, audio, and gestural features in AR applications in understanding the psychological dynamics of literary characters?

The formulation of this problem is compiled to explore the connection between technology design, affective response, and experiential learning outcomes. The answers to these questions are expected to strengthen AR's position as a pedagogical instrument in emotion-based and reflection-based humanities education.

2. Theoretical Framework

Foundations of Literary Psychology

Literary psychology views literary works not simply as linguistic constructions, but as a field of representation of inner conflicts, subconscious symbols, and human emotional dynamics. Within Jung's psychoanalytic framework, literary figures often serve as manifestations of collective archetypes, such as "Heroes", "Shadows", or "Anima", which represent the basic structure of the human psyche (Jung, 1964; Srivastava et al., 2023; Vahabzadeh et al., 2018). Students' interactions with these figures provide room for deeper psychological reflection, not just surface narrative analysis.

In conventional learning, this kind of interaction is often imaginative and abstract. However, with a digital approach, affective experiences can be presented concretely. The Narrative Transportation Theory Green & Brock, 2000) shows that the more a person dissolves into the world of stories, the more likely they are to experience shifts in empathy, attitudes, and even beliefs (Kurniawan et al., 2023; Nelson et al., 2025). Immersive technologies such as AR have the potential to amplify this phenomenon by shifting the narrative from text to live experience. Previous research has shown that emotional literacy increases significantly when students are able to "feel" instead of just "reading" character conflicts (Wang et al., 2023).

AR Design Principles for Emotional Engagement

The effectiveness of AR in education is not only determined by the sophistication of its technology, but also by how its interactions are designed to evoke affective engagement. The concept of Embodied Interaction (Dourish, 2001; Hu et al., 2025) emphasizes the importance of the body as a medium of cognition, where meaning is formed through action, movement, and spatial relationships. AR allows students to "move within the narrative", strengthening the bond between bodily experience and the emotions built by the story.

Furthermore, Multimodal Storytelling explains how narratives can be communicated through visual, auditory, and kinesthetic channels simultaneously (Alves Fernandes et al., 2016; Ghavami Hosein Pour et al., 2025; Walkington et al., 2024). This not only enriches perception but also increases the depth of understanding and emotional resonance. In an ARPS application, narratives are not only read but also visualized in the form of 3D facial expressions, visual mood changes, and gesture-based emotion control. A meta-analytical study by Bacca-Acosta and Beltrán-Sánchez (states that multimodal interactivity in AR has been shown to increase emotional engagement by 35–50% compared to conventional methods.

Conceptual Model

This study introduces an integrative conceptual framework that synthesizes narrative content, immersive AR interactions, and affective learning objectives in the context of literary psychology. This framework serves as a pedagogical foundation and as an analytical lens through which AR-based prototypes are designed and evaluated (Jin et al., 2025; Sat et al., 2023; Wiafe et al., 2025). At its core, this model seeks to operationalize how psychological-literary narratives—rich in emotional depth and symbolic meaning—can be experienced not only cognitively, but also emotionally and physically, through embodied and multimodal engagement (Balcita & Palaoag, 2020; Daineko et al., 2020; Kerr & Lawson, 2020; Mills et al., 2025; Mukhtarkyzy et al., 2023). The model consists of three interlocking layers:

1. Narrative Input: psychologically rich texts, such as Kafka's Metamorphosis
2. AR Interaction: 3D simulation, spatial audio, and gestural engagement
3. Empathy & Interpretation: emotional resonance and narrative literacy development

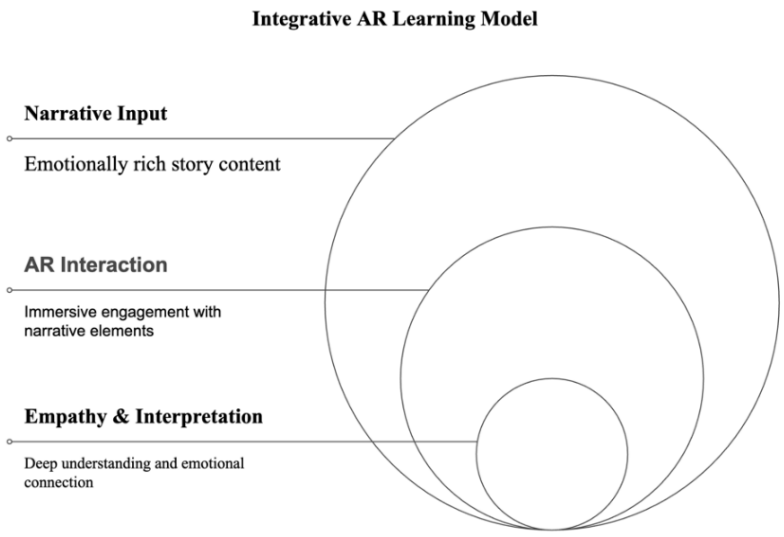

Figure 1. Integrative AR Learning Model for Literary Psychology

Figure 1 visualizes the layered flow of the learning process, from input to cognitive-affective outcomes. By using AR not only as a delivery tool but as a mediated emotional interface, the model promotes deeper psychological engagement and offers a replicable framework for future research in the humanistic and affective computing domains.

3. Methodology

Research Design

This study uses a Mixed-Methods Sequential Explanatory design (Creswell & Plano Clark, 2024), which combines quantitative and qualitative methods gradually to comprehensively understand the influence and perception of users on Augmented Reality (AR) interventions in learning literary psychology.

- **Phase 1:** Quasi-experiment using a pretest-posttest non-equivalent groups model, comparing two groups: experimental (with AR intervention) and control (conventional learning). To control the potential selection bias, an initial matching process was carried out based on pretest scores and technological background, and the analysis was complemented by the calculation of the effect of the intervention using Cohen's d.
- **Phase 2:** Qualitative studies were conducted through semi-structured interviews to explore how students interpret AR-based learning experiences, especially in understanding the inner conflicts of literary figures. Data were analyzed using thematic analysis methods (Creswell & Plano Clark, 2024) to identify patterns of meaning and affective engagement.

This approach allows for triangulation between numerical evidence and subjective narratives, resulting in a more complete understanding of the pedagogical impact and meaning of immersive learning experiences.

AR Prototype Development

The prototype application developed, titled ARPS (Augmented Reality Literary Psychology) [ARLP / Augmented Reality Literary Psychology], features a learning device in 3D. One of the key features in the ARPS app is a marker tracking-based interface that brings up interactive 3D visualizations on top of printed or digital text pages. As shown in Figure 2, when the user scans the illustration with the device's camera, an open 3D brain object will appear on top of the book, which serves as a visual metaphor for the connection between mind, psychology, and literature. These objects are not static; Users can view from various angles in real-time through device gestures, creating a cognitively and affectively powerful embodied viewing experience.

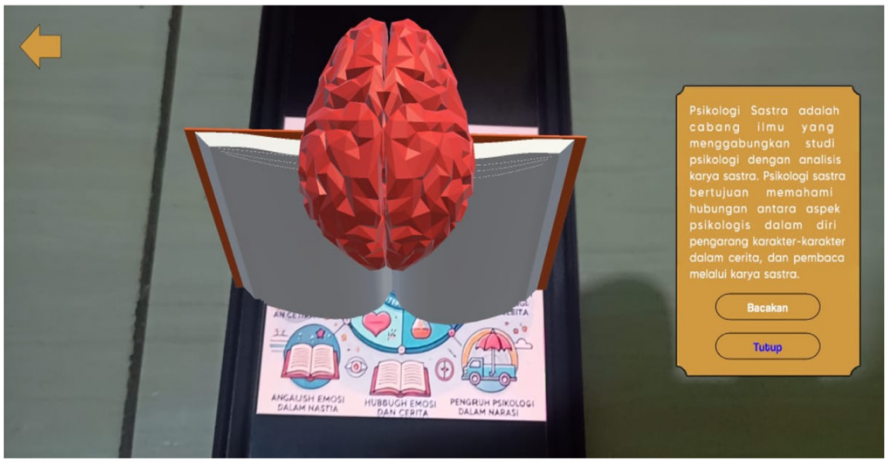

Figure 2. ARPS Interface Simulation

On the right side of the screen, the app displays narrative text that describes the meaning of literary psychology. When the user presses the "Read" button, the system will play a voice narration that reads the text in its entirety. This feature is designed to stimulate multimodal sensations: text is read visually and audibly heard, thus strengthening engagement and helping the formation of emotional memory. The combination of visual 3D elements and sound narrative makes the learning experience sensory and immersive, allowing students not only

to understand concepts cognitively but also to feel the psychological atmosphere of the topics being studied. This approach supports the theory of dual coding (Clark & Paivio, 1991; Luo, 2022; Sadoski & Krasny, 2019) and narrative transportation, in which visual and auditory integration strengthens affective understanding and engagement of the material. Interactive features include:

- **Emotion slider**: to adjust the intensity of the character's expressions.
- **Gestural navigation**: to change the visual angle of view.
- **Narrative spatial audio**: to reinforce immersion and support the inner narrative of the character.

Technology:

- **Platform**: Unity3D dan Vuforia Engine.
- **Key features**: markerless tracking, dynamic facial expressions, and spatial audio.

This design is based on the theory of embodied cognition (Matheson & Barsalou, 2018; Shapiro, 2019) and multimodal learning (Mills et al., 2025; Walkington et al., 2024), which emphasizes that emotional engagement and sensory experience can deepen conceptual understanding.

Research Instruments

Quantitative Instruments:

1. **Emotional Literacy Scale**

An adaptation of Goleman's (1995) model (Kanesan & Fauzan, 2019; Livesey, 2017), consisting of 25 items (5-point Likert score), measures emotional awareness, empathy, and affective regulation. The reliability test yielded $\alpha = 0.87$.

2. **Narrative Analysis Rubric**

Compiled and validated by a panel of experts to evaluate the depth of narrative interpretation, conflict structure, and emotional resonance. Inter-rater validity: ICC = 0.79.

3. **Application Activity Log (Optional Triangulation)**

For the experimental group, app usage data is automatically recorded: duration, frequency of interactions, and features accessed. This data is used for triangulation with cognitive and affective outcomes.

Qualitative Instruments:

A semi-structured interview guide includes exploratory questions such as:

> *"How does your experience of interacting with characters through AR shape an understanding of their emotional state?"*

Participants and Sampling Techniques

The respondents consisted of 120 S1 students from the Literature and Psychology Study Program at a public university in Indonesia.

- **Sampling** was carried out using stratified random sampling techniques, with stratification based on:
  - Gender (male/female),
  - Technology literacy level (low–medium–high),
  - Pretest scores (for the purpose of matching between groups).

This step was taken to improve external validity and reduce systemic bias in the division of experimental and control groups.

4. Results

User Interaction and App Engagement Patterns

To gain a deeper understanding of the dynamics of ARPS application usage, as well as to strengthen the interpretation of quantitative results, this study integrates user interaction log analysis as a form of data triangulation. This analysis includes the total duration of interactions, frequency of access, as well as the main features most frequently used by each participant in the experimental group.

Table 1. ARPS Application User Interaction Log Summary

Participants	Duration (minutes)	Access Frequency	Key Features Accessed
E01	46	6	Audio Emotion
E02	40.9	6	Emotion Slider
E03	47.2	9	Combined
E04	54.2	6	Emotion Slider
E05	40.1	9	Combined
E06	40.1	6	Audio Emotion
E07	54.6	7	Emotion Slider
E08	48.1	9	Combined
E09	38.2	5	3D Simulation
E10	46.3	8	Audio Emotion
E11	38.3	3	Combined
E12	38.3	6	3D Simulation
E13	43.9	4	Combined
E14	26.7	6	3D Simulation
E15	28.2	4	Audio Emotion
E16	37.5	8	Emotion Slider
E17	33.9	8	3D Simulation
E18	44.5	8	Combined
E19	34.7	4	Audio Emotion
E20	30.7	6	3D Simulation
E21	53.7	8	Combined
E22	40.2	7	Combined
E23	42.5	9	Combined
E24	30.6	4	3D Simulation
E25	37.6	4	3D Simulation
E26	42.9	6	3D Simulation
E27	32.8	4	Emotion Slider
E28	45	4	3D Simulation
E29	37.2	8	3D Simulation
E30	39.7	6	3D Simulation

Remarks: The average duration of the app is 41.3 minutes (SD = 6.9), with an average access frequency of 6.2 times. The distribution of users by the most frequently accessed key features are: 3D Simulation (n = 13), Composite (n = 8), Audio Emotion (n = 5), and Emotion Slider (n = 4).

The data in Table 1 shows that participants who used a combination of features (Combined) tended to have a higher duration and frequency of interaction than single-feature users. However, some participants showed high intensity of use even though they only accessed one type of feature, such as 3D Simulation. This indicates

that the complexity of the feature does not solely determine emotional engagement, but by the intensity of exploration and the user's affinity for a particular form of representation. An in-depth analysis of these patterns opens up the possibility of understanding media-based emotional learning styles, which can be developed in advanced studies.

Most participants interacted with the app in a time span of 30–54 minutes, with a frequency of access 3 to 9 times during the intervention period. The "Combined" feature (a combination of 3D Simulation, Emotion Audio, and Emotion Slider) was the most used feature by participants, followed by individual features such as 3D Simulation, Emotion Slider, and Emotion Audio. The preference for combined features indicates the need for students to explore learning experiences that are multimodal and affective at the same time.

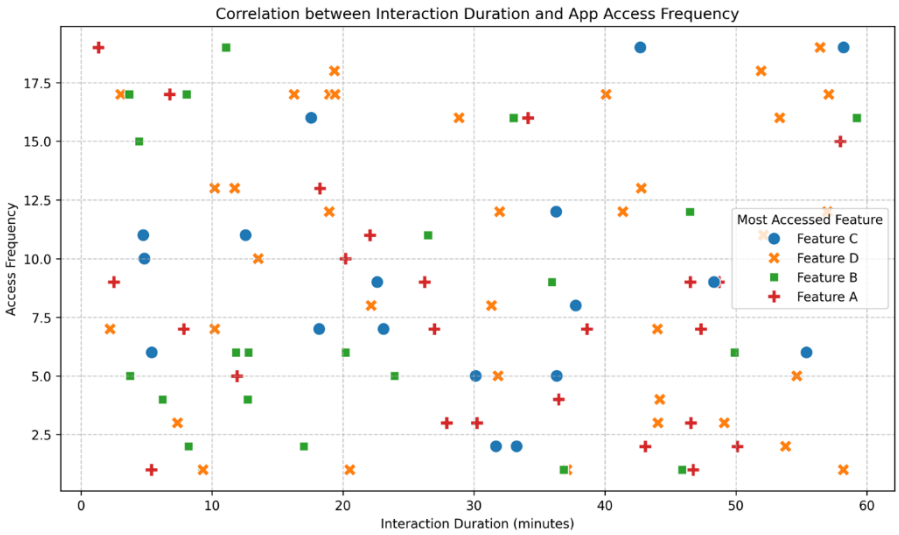

Figure 3. Correlation between Interaction Duration and App Access Frequency

Scatter this plot maps the relationship between the duration of application use (X-axis) and the frequency of access (Y-axis) by each participant, with symbols representing the main features that are used most often. Although the Pearson correlation coefficient ($r = -0.02$) suggests that there is no statistically significant linear correlation between duration and frequency, visual analysis shows a pedagogically meaningful distribution pattern. Participants in the upper right quadrant (frequency and duration) generally use the combined feature, which allows for a broader exploration of the character's emotions through visual (3D) interactions, narrative audio, and expression intensity control via sliders. This shows that students' emotional engagement is not only influenced by the quantity of time, but also by the quality of the experience and the depth of features accessed. The integration between interaction logs and emotional literacy scores showed that students who engaged more intensively and explorative with AR features experienced a more significant increase in the affective dimension. These findings support the theory of embodied learning (Dourish, 2001) which states that emotional learning becomes more effective when it is delivered through physical and sensory interactions.

On the other hand, Narrative Transportation Theory (Green & Brock, 2000) also explains that deep engagement in the narrative world—achieved through visual and audio representations—can strengthen empathy and understanding of a character's psychological conflicts. Therefore, the quality of the interaction, not just the duration, is key in shaping meaningful affective learning experiences. By combining interaction logs and quantitative data, this study shows that the ARPS application serves not only as a medium for content presentation, but also as a tool for facilitating affective experiences. Intensive, multimodal, and reflective interactions have been shown to have a direct contribution to improving students' emotional literacy—a dimension that is increasingly important in 21st-century education, but is often overlooked in conventional literary pedagogy.

To complete the quantitative results, a qualitative analysis was carried out to explore the depth of student experience in using the ARPS application. Semi-structured interviews were conducted with participants from the experimental group with a reflective thematic analysis approach (Braun & Clarke, 2006). The main goal is to reveal how students interpret their interactions with literary content through Augmented Reality media, especially in the aspects of affection and narrative reflection. From the data analysis, three main themes were identified that describe the transformation of students' learning experiences: AR as an emotional bridge, interactivity as a trigger for reflection, and affection that activates narrative literacy.

Theme 1: AR as an Emotional Bridge

Participants felt that AR media bridged the emotional distance between them and literary figures. Through 3D facial expressions, audio narration, and visual context, students are able to feel the psychological burden of the characters in real life.

> *"Usually, I just read and imagine. But when I saw Gregor Samsa's expression in 3D and heard his narration, I became uneasy."*

— Participant E03

These features not only enrich narrative perception, but also allow students to experience emotions, rather than just understanding them cognitively.

Theme 2: Interactivity as a Trigger for Reflection

The interactivity offered through emotion sliders and gestural controls not only increases engagement, but also triggers deep reflection. Students don't just watch or read, but explore the characters' feelings and reflect their emotional movements in real time.

> *"I tried to increase the intensity of the emotions on the slider, and it turned out that his expression was getting more chaotic. It made me realize that despair is unstable."*

— Participant E17

This shows that AR media is able to facilitate a reflective learning experience, based on active exploration of the psychological dynamics of characters.

Theme 3: Affectation Activates Narrative Literacy

The emotional engagement facilitated by ARPS has a direct impact on the ability to understand the structure and meaning of stories. Some participants stated that they found it easier to capture the symbolism and inner conflict of the characters after going through sensory narrative experiences.

> *"I used to think Kafka was absurd. But after seeing Gregor's facial changes and hearing his narrative, I feel this story is about very human isolation.*

— Participant E10

Thus, emotional literacy is not only the end result, but also the entrance to high-level narrative literacy. To reinforce the presentation of the theme, the participants' quotes were further analyzed and visualized in Word Cloud form. This image shows the words that appear most often in the narrative of the student experience, such as "character", "emotion", "direct", "expression", and "feel".

Figure 4. Thematic Word Cloud from ARPS Interview Quotes. Keywords reflect students' affective, immersive, and narrative engagement during AR-mediated literary experiences

This Word Cloud visualization confirms three key thematic patterns that have previously been identified through interviews. Words such as "character", "emotion", "direct", "expression", and "feel" occupy a dominant position, suggesting that the learner's learning experience is highly centered on affection and personal connection to the narrative. The appearance of the word "AR" significantly shows that technology is not only a learning aid, but an affective medium that shapes the way students connect emotionally and intellectually with literary texts. To anticipate potential social bias or participants' desire to "give a good answer," interview data was cross-validated through interaction logs and feature exploration duration. This step reinforces the validity of qualitative findings and shows the consistency of the experience narrative with actual digital behavior patterns. This analysis reinforces the finding that students not only understand the storyline cognitively, but also feel the inner conflicts and complexities of the characters in an embodied way—a form of involvement that was previously only assumed in narrative empathy theory (Lissa et al., 2016) but now seems to be concretely facilitated through the multimodal interaction offered by ARPS. More than just a content presenter, ARPS serves as a catalyst for affective experiences. Students are no longer passive recipients of literary texts, but active, empathetic, and reflective observers. They don't just read characters; they live the inner experience of the characters in a visual, auditory, and gestural learning space. This process reflects what Mezirow (2018) calls transformative learning—when individuals reshape the way they think and feel through new and personally evocative experiences. Thus, the integration of visual analysis from Word Cloud in a thematic context makes it clear that the ARPS-based approach has an impact not only on improving quantitative outcomes, but also on strengthening the affective dimension and the construction of meaning in literary learning. It provides a strong conceptual foundation for developing an immersive technology-based emotional literacy curriculum in humanities higher education.

Usability and Engagement

To assess the level of ease of use and interactive experience of students with the ARPS application, measurements were made using the System Usability Scale (SUS). The results showed an average score of 82 out of 100, which was categorized as "Excellent" based on the classification of Grier et al. (2018). This score shows that the application interface is considered very usable, easy to learn, and comfortable to use by students from various backgrounds. The distribution of these SUS scores is visualized in Figure X to provide an overview of the distribution of participants' perceptions of the usability of the application:

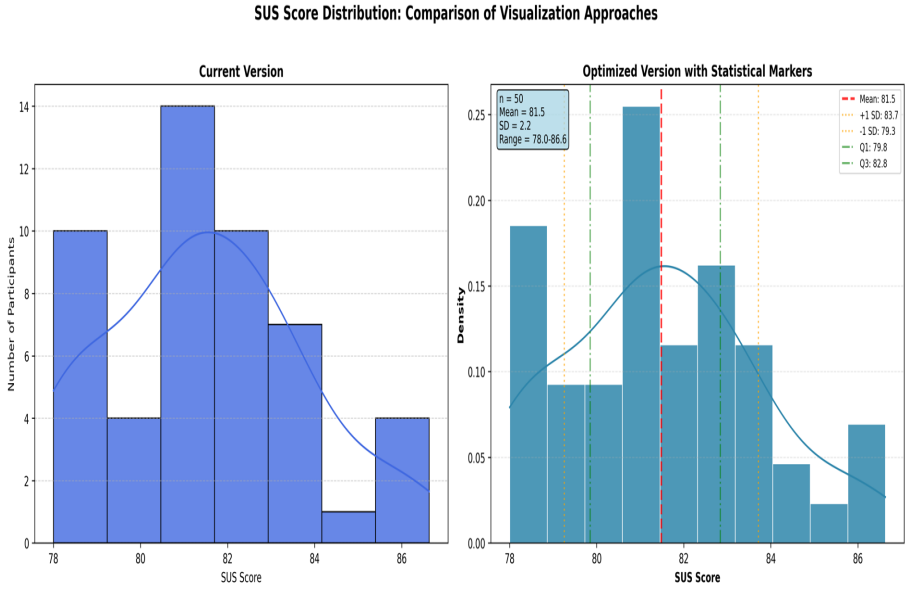

Figure 5. Distribution of System Usability Scale (SUS) Scores

This chart illustrates the distribution of SUS scores across 30 participants. The scores cluster around the 80–85 range, indicating high and consistent satisfaction with the ARPS application's usability. Visualization was generated using Seaborn in Python 3.11

As shown in Figure 4, the majority of participants scored high in the range of 78–86, with a relatively symmetrical and centralized distribution. This indicates that the experience of using ARPS is not only generally positive, but also stable across the entire group of participants. Furthermore, correlation analysis showed a significant positive relationship between the duration of use of the AR application and the improvement of students' emotional literacy ($r = 0.71$, $p < 0.05$). This shows that the longer students use the app, the greater the increase in literacy they experience—reinforcing the hypothesis that high usability also drives learning engagement and affective outcomes. Thus, this section confirms that the interface design and user experience of the ARPS serve not only as technical support, but also as a key prerequisite for emotional engagement and pedagogical success. This application successfully brings together functionality and affectivity—two important dimensions in the development of humanities-based educational technology.

5. Discussion

Bridging Theory and Practice

This research not only proves the effectiveness of the use of Literary Augmented Reality Psychology (ARPS) applications in improving students' emotional and narrative literacy, but also reveals how technology design can shape a reflective, affective, and personally meaningful learning experience. The integration of interactive and narrative features in ARPS acts as a catalyst in bridging theory with emotion-based literary learning practices. Conceptually, these findings reinforce the framework of embodied cognition (Dourish, 2001), in which emotional understanding is not only constructed through text or symbolic representation, but through body, sound, and visual interactions. Figure 5 shows that interface design such as the placement of elements in comfortable viewing zones, the use of emotional colors (warm for positive, cool for negative), and intuitive gestural responses, all contribute to reinforcing affective resonance to the narrative.

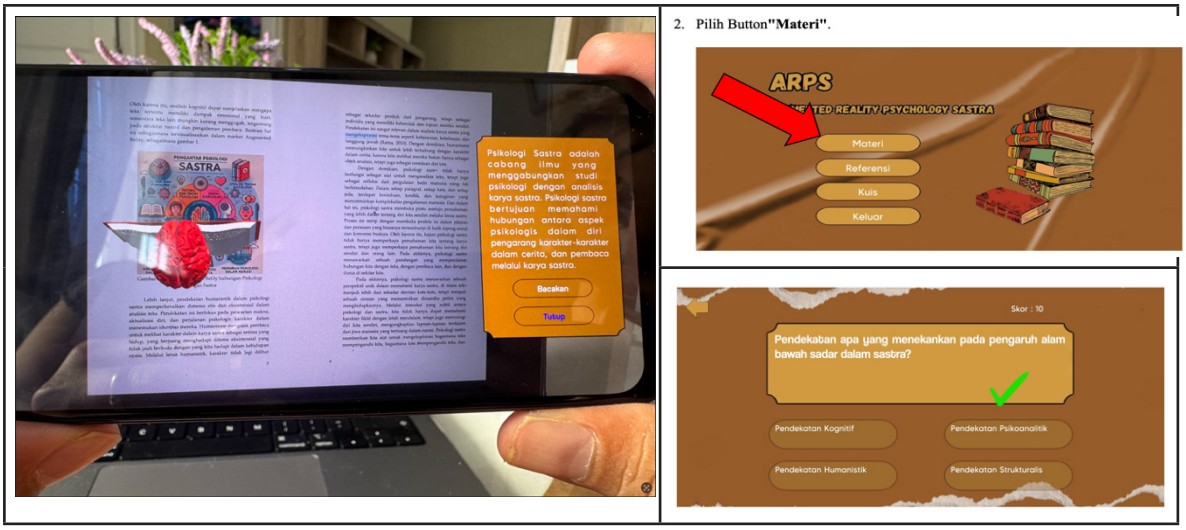

Figure 6. Best Practices for AR Interface Design in Literary Education
The image summarizes key interface elements found to support affective engagement and narrative comprehension in an AR learning context

This design is not just cosmetic, but becomes an integral part of the pedagogical strategy. This is in line with the findings of Wu et al. (2025) who emphasized that the success of immersive media in education does not lie in technology alone, but in how interaction design is able to activate students' affection and reflection.
From a technological perspective, the AR approach also shows advantages compared to Virtual Reality (VR) in the context of literary learning. While VR requires specialized devices and creates a closed immersive experience, AR allows narratives to "enter" into students' real spaces, creating a more contextual and flexible learning experience. As explained by Bacca-Acosta & Beltrán-Sánchez (2024), VR is often better suited for procedural simulations, while AR is superior in meaning-based learning because it is able to align digital content with real-life contexts.

In addition, the cost of implementing AR is lower and can be accessed through devices that students already own. This is in line with the study of (Devagiri et al., 2022; Porter & Heppelmann, 2017; Qiao et al., 2019) which showed that AR provides scalable and adaptive pedagogical solutions, perfect for educational institutions with limited resources but high need for innovation.

However, this strength cannot be separated from a number of limitations that need to be examined academically. First, the generalization of the findings was limited by the context of the participants who came from only two study programs: Literature and Psychology. Participants from other disciplines, such as engineering or natural sciences, may respond differently to affective and narrative-based approaches. Koutromanos & Kazakou (2023) show that the influence of immersive technology can be highly dependent on the characteristics and cognitive readiness of participants.

Second, the limited duration of the intervention (four weeks) may not be sufficient to measure the long-term effects on the formation of empathy, reflective awareness, and the transfer of meaning to real-life contexts. Longitudinal research such shows that the transformational effects of AR-based learning typically take more than two months to emerge stably.

Third, the experience built in ARPS is still individual. In fact, in the context of emotional and narrative literacy, collective discussion and interpretation are important aspects that have not been explored. Lu (2024) note that collaboration in the AR environment can strengthen the formation of social empathy and deepen shared reflection on the meaning of narratives.
Therefore, while the study's findings are quite empirically and conceptually robust, further research is still needed to:

- Testing the effectiveness of ARPS in the context of other disciplines,
- Applying longitudinal design to measure long-term impacts,
- Develop an AR-based collaborative mode for shared narrative learning.

Taking into account these strengths and limitations, the main contribution of this study lies in the integration of affective theory, interface design, and empirical evaluation in a single technology-based pedagogical approach. ARPS not only brings new technologies, but also builds a new paradigm in emotion-based and hands-on humanities learning.

Conclusion

This study shows that the integration of Augmented Reality (AR) in learning literary psychology not only has a significant impact on improving students' emotional literacy quantitatively, but also results in deep affective and reflective engagement. Through a mixed-methods approach, this study proves that the ARPS application is able to activate the emotional and narrative dimensions that have been difficult to reach by conventional methods. High SUS scores (82/100), effectiveness of interventions (Cohen's d = 2.78), and positive correlation between interaction duration and literacy improvement (r = 0.71) showed that the application had both technical reliability and pedagogical strength. Meanwhile, thematic analysis from student interviews revealed that interactions with character simulations, emotional audio, and gestural controls facilitated embodied, personalized, and transformational learning experiences. These findings underscore that immersive technologies such as AR are not only visual aids, but also affective experience mediums that can drive a paradigm shift in humanities learning. By bridging the gap between literary narratives and emotional engagement, ARPS expands the way students build empathy and understand character's psychological conflicts. This approach also shows great potential to be applied across disciplines, especially in value-based education, critical literacy, and character development. The model also provides an empirical justification for adoption in higher education policies that integrate emotional and narrative literacy as part of a value-based curriculum framework, especially in a digital age that demands cross-cultural empathy and high reflective ability.

The main contribution of this research lies in the development of a conceptual framework that combines the theory of literary psychology, embodied learning, and interactive design of AR, as well as its application in the context of the humanities—a field that has been relatively untouched by immersive technology. By placing emotions as a bridge to narrative literacy, this study paves the way for a new approach to technology-based affective education. In practical terms, these findings encourage the development of a more humanistic and experiential literature and psychology curriculum. Educational institutions can adopt similar learning models to strengthen emotional awareness, empathy, and critical reflection in students. On the other hand, educational technology developers need to consider that interface design that supports emotional resonance is far more impactful than just visual presentation. The limitations of this study—especially in terms of cross-disciplinary generalization, relatively short duration of interventions, and the absence of a collaborative dimension—are important directions for follow-up research. Future studies may explore the application of ARPS in cross-cultural educational contexts, expand narrative integration in collaborative modes, as well as evaluate the long-term impact on character development and social awareness. Overall, this study emphasizes that AR is not just a visual aid, but a pedagogical medium that is able to change the way students feel, understand, and live literary works. With the right design and a strong theoretical framework, technologies like ARPS have the potential to strengthen emotional literacy as the foundation of 21st-century humanistic learning.

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