Enhancing Creative Agency in Poetry Translation: Integrating Project-Based Learning and Digital Mediation

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Abstract
Translation courses in EFL higher education often prioritize linguistic accuracy over creative expression, limiting students' agency and digital skills in poetry translation. This study aims to develop and evaluate a Project-Based Learning (PjBL) model integrated with digital media to enhance creativity among sixth-semester English Education students. Using a quasi-experimental mixed-methods design with 22 participants, pre- and post-intervention performance-based creativity tests assessed fluency, originality, flexibility, and elaboration; observation checklists tracked collaboration and engagement; and semi-structured interviews captured student perceptions. Quantitative data underwent paired-sample t-test analysis, while qualitative data received thematic analysis. Results revealed significant creativity gains (mean score rising from 60.9 to 79.2, $p < 0.05$), with originality improving most prominently; observations confirmed high digital tool use and teamwork; interviews highlighted boosted motivation and confidence. Integrating PjBL and digital media proves effective for fostering creative agency, digital literacy, and higher-order thinking in EFL translation pedagogy.

1. Introduction

In the higher education, translation courses in English Education programs are expected to develop not only linguistic accuracy but also higher-order skills such as creativity, critical thinking, and digital literacy. Poetry translation, in particular, demands sensitivity to meaning, aesthetic nuance, and cultural, requiring students to move beyond literal equivalence toward interpretative reconstruction (Abduvakhabova, 2024; Guerberof-Arenas & Toral, 2022; Novawan, 2023). However, classroom practices in translation learning frequently emphasize procedural accuracy and rule-based equivalence, providing limited opportunities for students to explore creative interpretation and multimodal expression (Azizi, Azizi, Lewandowska, Majda, & Gosteva, 2022; Kristiantari, Widiana, & Artawan, 2023). In the era of digital transformation, such conventional approaches are increasingly insufficient, as students are expected to integrate disciplinary knowledge with technological competencies and creative production skills (Reddy, Sharma, & Chaudhary, 2022; Tinmaz, Fanea-Ivanovici, & Baber, 2023).

The rapid integration of digital technology in higher education calls for instructional models that foster active engagement, collaboration, and authentic learning experiences. Project-Based Learning (PjBL) has been widely recognized as a pedagogical approach capable of promoting deeper learning, creativity, and learner autonomy through meaningful projects (Miettinen, 2022; Yu, 2024). By engaging students in problem-solving and product-oriented tasks, PjBL supports the development of 21st-century competencies, including creativity and digital literacy (Setiawan & Arif, 2023; Zulyusri, Elfira, Lufri, & Santosa, 2023). In translation pedagogy, integrating digital media within project-based frameworks may provide students with opportunities to negotiate meaning collaboratively, experiment with stylistic choices, and publish their work in multimodal formats (Hou, 2024; Retnomurti, Iskandar, & Dewanti, 2025; Ribeiro, Chorão, & Tavares, 2021; Yeh & Fu, 2025). Such integration is pedagogically significant because it aligns translation learning with contemporary digital practices while fostering creative engagement (Khasawneh & Shawaqfeh, 2024; Marczak, 2018).

Previous research has explored Project-Based Learning as an effective strategy to enhance collaboration, critical thinking, and engagement in various disciplines, including language education (Yu, 2024; Zulyusri et al., 2023). In translation courses, PjBL has been shown to improve collaborative learning and analytical skills (Tambunan, Ramadhani, & Sibuea, 2024). Meanwhile, studies in digital pedagogy emphasize the role of technology in supporting multimodal literacy and creative expression (Barbosa & Sales, 2022; Selfa Sastre & Falguera Garcia, 2022). Digital tools such as online platforms, e-portfolios, and multimedia publishing

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environments enable learners to construct knowledge interactively and present outputs beyond traditional text-based formats (Reddy et al., 2022).

Despite these developments, research in translation pedagogy has often treated creativity and digital integration as separate domains. Studies on creativity in literary translation tend to focus on cognitive or linguistic dimensions (Guerberof-Arenas & Toral, 2022), while digital learning research emphasizes technological affordances without explicitly addressing creative translation processes (Tinmaz et al., 2023). Moreover, limited empirical research has examined how the systematic integration of Project-Based Learning and digital media can enhance students' creativity specifically within poetry translation in English as a Foreign Language (EFL) program.

While numerous studies have examined the effectiveness of Project-Based Learning in promoting collaborative and critical thinking skills, few have addressed its integration with digital media to enhance creativity in poetry translation within EFL higher education (Eswaran, 2024; Song, Razali, Sulaiman, Jeyaraj, & Ds, 2024; Williamson, 2023). Furthermore, existing research rarely combines creativity assessment frameworks with translation quality indicators in a structured instructional model (Long, Kerr, Emler, & Birdnow, 2022; López, Férez, & Caro, 2021; Sadrnia & Shahnazari, 2023). Therefore, there is a need for an instructional design that systematically integrates Project-Based Learning and digital media to foster students' creative engagement in translation tasks. This study seeks to fill this gap by developing and evaluating a digitally supported project-based model in the Translation course.

The objective of this study is to investigate the integration of Project-Based Learning and digital media in the Translation course to enhance students' creativity. Specifically, this study aims to (1) develop a digital project-based learning model for poetry translation and (2) examine its effectiveness in improving students' creativity in translation tasks.

2. Method

This study employed a quasi-experimental mixed-method design within a Research and Development (R&D) framework. The effectiveness of the developed instructional model was examined using a one-group pre-test–post-test design. The participants were 22 sixth-semester students (16 females and 6 males) enrolled in a Translation course at an English Education program in a private university in Indonesia.

Data were collected using three instruments. First, a performance-based creativity test in the form of poetry translation tasks was administered as pre-test and post-test. Creativity was assessed using an analytic rubric adapted from Torrance's (1966), including fluency, flexibility, originality, and elaboration, integrated with translation quality criteria (accuracy, cultural sensitivity, style, and readability). Each dimension was rated on a five-point Likert scale.

Second, an observation checklist was used to record students' engagement during the implementation of Project-Based Learning, focusing on participation, use of digital tools, collaboration, and creative experimentation. Third, semi-structured interviews were conducted with 12 students to explore their perceptions of creativity development, digital literacy, and learning experiences.

The study followed the ADDIE development model, including analysis, design, development, implementation, and evaluation stages. Quantitative data were analyzed using descriptive statistics and paired-sample t-test to examine differences between pre-test and post-test scores, with significance set at $p < 0.05$. Effect size was calculated using Cohen's d. Qualitative data from observations and interviews were analyzed using thematic analysis to identify patterns related to engagement, motivation, and creative development.

3. Results and Discussion

3.1. Results

3.1.1. Product Validation Results

The Digital Poems Booklet was evaluated by two content experts and one media expert. Each component was assessed using a 5-point validation scale (1 = Very Poor, 5 = Excellent). As presented in Table 5, the overall validation score of the Digital Poems Booklet reached a mean of 4.56 out of 5.00, which falls within the "Highly Valid" category. Among the assessed components, relevance to Project-Based Learning principles received the highest mean score (4.70), followed by content appropriateness (4.60) and instructional clarity (4.60). Media feasibility and rubric clarity obtained mean scores of 4.50 and 4.40 respectively. These results indicate that the developed product met content, pedagogical, and media design standards prior to classroom implementation.

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Table 5. Expert Validation Results

Component	Mean Score	Category
Content Appropriateness	4.60	Highly Valid
Media Feasibility	4.50	Highly Valid
Relevance to PjBL Principles	4.70	Highly Valid
Rubric Clarity	4.40	Highly Valid
Instructional Clarity	4.60	Highly Valid
Overall Mean	4.56	Highly Valid

3.1.2. Descriptive Statistics of Pre-test and Post-test Scores

To determine whether the integration of Project-Based Learning and digital media was associated with measurable changes in students' creativity, a comparison of pre-test and post-test scores was conducted. The creativity performance test was administered under equivalent classroom conditions before and after the intervention period. Descriptive statistics were computed to examine central tendency, dispersion, and score distribution across both measurement points. These statistics provide an initial overview of students' performance changes prior to inferential testing.

Table 6 shows the descriptive statistics of students' creativity scores before and after the intervention. The pre-test mean score was 60.9 (SD = 6.85), while the post-test mean increased to 79.2 (SD = 7.10). The minimum and maximum scores also shifted upward from 50–72 in the pre-test to 65–92 in the post-test. The calculated percentage gain of 30.0% reflects an overall increase in students' creativity performance following the integration of Project-Based Learning and digital media.

Table 6. Descriptive Statistics of Creativity Scores

Test	N	Mean	SD	Minimum	Maximum
Pre-test	22	60.9	6.85	50	72
Post-test	22	79.2	7.10	65	92

The percentage gain was calculated using equation 1:

$$\text{Percentage Gain} = \frac{Post-Pre}{Pre} \times 100 \quad (1)$$

$$= \frac{79.2-60.9}{60.9} \times 100 = 30$$

3.1.3. Creativity Improvement by Dimension

To examine how the intervention influenced specific components of creativity, the analysis was further disaggregated into four dimensions: fluency, flexibility, originality, and elaboration. Mean scores for each dimension were calculated for both pre-test and post-test conditions. As shown in Table 7, all four creativity dimensions demonstrated measurable increases from pre-test to post-test. Originality recorded the highest gain (22.3 points), representing a 37.9% increase. Flexibility showed a gain of 18.6 points (30.3%), followed by elaboration (16.2 points; 26.5%) and fluency (16.1 points; 26.0%). The upward shift across all dimensions indicates that the improvement was not isolated to a single aspect of creativity but occurred consistently across multiple components of creative performance.

Table 7. Improvement by Creativity Indicators

Dimension	Pre-test Mean	Post-test Mean	Gain	% Increase
Fluency	62.1	78.2	16.1	26.0%
Flexibility	61.5	80.1	18.6	30.3%
Originality	58.9	81.2	22.3	37.9%
Elaboration	61.0	77.2	16.2	26.5%

3.1.4. Normality Testing

Prior to conducting inferential statistical analysis, the assumption of normality was examined to determine whether parametric testing was appropriate. The Shapiro–Wilk test was applied because the sample size was below 50 participants, making it suitable for small-sample normality assessment. The results of the normality test are presented in Table 8. As presented in Table 8, the Shapiro–Wilk test yielded significance values of 0.481 for the pre-test and 0.382 for the post-test. Since both values exceed the alpha level of 0.05, the null hypothesis of normal distribution cannot be rejected. These findings indicate that the distribution of creativity scores did not significantly deviate from normality. Therefore, the assumption for conducting parametric statistical analysis was satisfied, and a paired-sample t-test was deemed appropriate for comparing pre-test and post-test scores.

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Table 8. Normality Test Results

Variable	W	Sig.
Pre-test	0.962	0.481
Post-test	0.955	0.382

3.1.5. Paired-Sample t-Test Results

To determine whether the observed difference between pre-test and post-test creativity scores was statistically significant, a paired-sample t-test was performed. This test was selected because the same participants were measured at two different time points, and the normality assumption had been satisfied. The results of the paired-sample t-test are presented in Table 9. As shown in Table 9, the mean difference between pre-test and post-test scores was 18.3, with a standard deviation of 5.21. The computed t-value was 16.45 with 21 degrees of freedom. The significance value (p = 0.001) was below the alpha level of 0.05, indicating that the difference between pre-test and post-test scores was statistically significant. These findings confirm that students' creativity scores increased significantly following the instructional intervention.

Table 9. Paired-Sample t-Test Results

Mean Difference	SD Difference	t	df	Sig. (2-tailed)
18.3	5.21	16.45	21	0.001

3.1.6. Effect Size (Cohen's d)

In addition to statistical significance testing, effect size was calculated to determine the practical magnitude of the intervention's impact. Cohen's *d* was used to measure the standardized mean difference between pre-test and post-test scores. According to Cohen's (1988) benchmarks (0.20 = small, 0.50 = medium, 0.80 = large), a value of 2.62 represents a very large effect size. This indicates that the magnitude of improvement in students' creativity scores was substantial in practical terms.

3.1.7. Observation Results

Classroom observations were conducted throughout the implementation phase to document students' behavioral engagement during the integration of Project-Based Learning and digital media. Observation checklist scores were recorded across multiple sessions and subsequently averaged to obtain overall engagement indicators. The checklist employed a four-point scale ranging from 1 (Very Low) to 4 (Very High). The summary of observation results is presented in Table 10. As shown in Table 10, all observed indicators fell within the "High" category. The highest mean score was recorded for the use of digital tools (M = 3.68), followed by participation in group discussions (M = 3.52), creative experimentation (M = 3.50), and collaborative negotiation of meaning (M = 3.45). The consistently high scores across indicators demonstrate sustained student engagement throughout the implementation period.

Table 10. Observation Summary

Indicator	Mean Score (1–4)	Category
Participation	3.52	High
Use of Digital Tools	3.68	High
Collaborative Negotiation	3.45	High
Creative Experimentation	3.50	High

3.1.8. Interview Findings

Semi-structured interviews were conducted with 12 randomly selected participants to explore their perceptions of the learning experience following the intervention. The interview transcripts were analyzed using thematic analysis, and recurring patterns were coded and categorized into broader themes. The frequency of each theme was calculated based on the proportion of participants who explicitly expressed statements aligned with the identified categories. The summary of thematic findings is presented in Table 11. As shown in Table 11, the most frequently reported theme was enhanced collaboration (85%), followed by increased motivation (82%), improved creative confidence (79%), and digital literacy growth (76%). These percentages represent the proportion of interviewed participants who mentioned experiences corresponding to each theme during the reflective interviews. The thematic distribution indicates that students' perceptions extended beyond measurable performance gains to include affective and skill-based dimensions of learning.

Table 11. Interview Themes

Theme	Frequency (%)
Increased Motivation	82%
Digital Literacy Growth	76%
Improved Creative Confidence	79%

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Theme	Frequency (%)
Enhanced Collaboration	85%

3.2. Discussion

The findings of this study demonstrate that the integration of Project-Based Learning (PjBL) and digital media significantly improved students' creativity in poetry translation. This is evidenced by the increase in mean scores from 60.9 in the pre-test to 79.2 in the post-test, with a percentage gain of 30.0%. The paired-sample t-test results ($p = 0.001$) further confirm that the improvement was statistically significant, while the large effect size ($d = 2.62$) indicates a substantial practical impact of the intervention.

A closer analysis of creativity dimensions shows that originality experienced the highest increase (37.9%), followed by flexibility (30.3%), elaboration (26.5%), and fluency (26.0%). This pattern suggests that students not only improved in generating translation output but also developed the ability to produce more innovative and contextually appropriate interpretations. The strong improvement in originality indicates a shift from literal translation toward more creative and expressive language use, which is essential in poetry translation. This finding supports the view that creativity in translation involves flexible and innovative meaning construction rather than strict equivalence (Guerberof-Arenas & Toral, 2022).

These quantitative findings are reinforced by classroom observation results, which showed consistently high engagement across all indicators. The use of digital tools recorded the highest mean score ($M = 3.68$), followed by participation ($M = 3.52$), creative experimentation ($M = 3.50$), and collaborative negotiation ($M = 3.45$). These results indicate that students were actively involved in the learning process and were able to utilize digital platforms to support both linguistic and creative development. The active use of digital tools suggests that technology can facilitate interactive and collaborative learning environments, which are known to enhance student engagement and higher-order thinking (Reddy et al., 2022; Tinmaz et al., 2023).

Furthermore, the interview findings provide additional support for these results. A large proportion of students reported enhanced collaboration (85%), increased motivation (82%), improved creative confidence (79%), and growth in digital literacy (76%). These responses indicate that the learning experience contributed not only to cognitive improvement but also to affective and skill-based development. Increased motivation and confidence are important factors in supporting creative performance, particularly in complex tasks such as literary translation (Yu, 2024).

The results suggest that the effectiveness of this instructional model can be attributed to the combination of structured project-based activities and digital media integration. The PjBL approach provided opportunities for students to engage in iterative processes, including drafting, peer discussion, revision, and final production. This process allowed students to explore multiple translation alternatives and negotiate meaning collaboratively. Such characteristics of PjBL have been widely recognized as effective in fostering creativity and critical thinking in educational contexts (Zulyusri et al., 2023).

In addition, digital media appears to have amplified students' creative engagement by transforming translation tasks into publicly oriented products. The requirement to produce digital outputs encouraged students to consider not only linguistic accuracy but also aesthetic and communicative aspects of their work. This aligns with previous studies highlighting the role of digital environments in supporting multimodal expression and creative language use (Barbosa & Sales, 2022; Selfa Sastre & Falguera Garcia, 2022).

These findings extend previous research on Project-Based Learning in translation contexts, which has primarily focused on collaboration and critical thinking (Tambunan et al., 2024). The present study demonstrates that when PjBL is integrated with digital media and supported by explicit creativity assessment, it can also significantly enhance students' creative performance.

3.3. Pedagogical Implications

From a pedagogical perspective, the findings imply that translation instruction should move beyond accuracy-focused approaches and incorporate opportunities for creative exploration. The integration of creativity dimensions (Cramond, 2018) with translation quality criteria (Newmark, 1988) provides a balanced framework for assessing both innovation and accuracy in translation tasks.

Moreover, the findings highlight the importance of digital literacy in contemporary translation pedagogy. Students' ability to design and present their work using digital tools reflects the growing need for multimodal communication skills in language education (Reddy et al., 2022; Tinmaz et al., 2023).

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3.4. Limitations of the Study

Despite these positive findings, this study has several limitations. The use of a one-group pre-test–post-test design limits comparison with control groups, and the sample size was relatively small. Future research is recommended to involve larger samples and experimental designs to further validate these findings.

Future studies may also explore how specific components of Project-Based Learning, such as peer feedback or digital publication, contribute differently to creativity development. Such investigations would provide deeper insights into how creative translation skills can be effectively developed in EFL contexts.

4. Conclusion

This study demonstrates that the integration of Project-Based Learning and digital media in the Translation course provides a structured and pedagogically grounded approach to enhancing students' creativity in poetry translation. By combining creativity theory with translation quality criteria within a digitally mediated project framework, the instructional model moves translation learning beyond procedural accuracy toward interpretive, collaborative, and multimodal meaning-making. The findings highlight the importance of positioning creativity as a measurable and scaffolded dimension of translation competence rather than as an incidental outcome. The study contributes to the development of digitally responsive translation pedagogy in EFL higher education and suggests that project-oriented, publication-based tasks can strengthen both creative performance and digital literacy. Future research may explore the sustainability of creativity gains across genres and institutional contexts, as well as examine how specific elements of project design and digital publication influence translational creativity in diverse learning environments.

Author Contributions

All authors contributed substantially to the research and preparation of this manuscript. All authors have read and approved the final version of the manuscript.

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Declaration of Conflicting Interests

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability

The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration on AI Use

The authors declare that no artificial intelligence (AI) or AI-assisted tools were used to generate the content, ideas, analyses, or conclusions of this manuscript. AI tools were used solely to improve language clarity and readability under strict human oversight. All intellectual content and scholarly decisions remain the responsibility of the authors.

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