VELES JOURNAL

Vol. 9, No. 2; August 2025
E-ISSN 2579-7484
Pages 400-412
DOI: http://dx.doi.org/10.29408/veles.v9i2.30694

Simulation-Based Project Learning in ESP: The Effectiveness of Crewpers for Vocational Journalism Education

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Submission History:
Submitted: June 8, 2025
Revised: August 13, 2025
Accepted: August 20, 2025

Abstract

Preparing students for professional communication in English for Journalism requires more than linguistic accuracy; it demands authentic, workplace-oriented learning environments that replicate editorial processes. Despite the increasing use of project-based learning (PBL) in English for Specific Purposes (ESP), few studies have examined digital newsroom simulations aligned with vocational "teaching factory" models. This study evaluates the effectiveness of Crewpers, a student-developed digital journalism platform designed as an authentic newsroom simulation, in enhancing vocational English for Journalism instruction. A quasi-experimental one-group pretest–posttest design was employed with 16 students enrolled in the D4 English for Business and Professional Communication program at a public polytechnic in Indonesia. Using a validated 16-item questionnaire, student perceptions were measured across four dimensions: critical thinking, collaboration, journalistic production, and communication. Paired-sample t-test results revealed statistically significant improvements in all dimensions ($p < .001$), with the largest gains observed in journalistic production, where students reported greater confidence in producing publishable news content. Students also highlighted features such as real-time editorial feedback, role distribution, and public publishing as central to their learning gains. These findings suggest that Crewpers effectively bridges ESP instruction with professional performance tasks, offering a replicable model of simulation-based pedagogy for vocational contexts. While limited by sample size and reliance on self-reported data, this study underscores the pedagogical value of integrating digital newsroom platforms into ESP and recommends future research using mixed-method designs to assess long-term impacts on writing quality and professional readiness.

Keywords: English for specific purposes, English for journalism, Crewpers platform, vocational education.

INTRODUCTION

English for Specific Purposes (ESP) is recognized as a branch of language education that emphasizes communicative competence tailored to professional, academic, or vocational domains, typically grounded in needs analysis and contextualized instructional design (Anthony, 2018; Basturkmen, 2017). Unlike general English instruction, ESP courses

focus on discipline-specific lexis, genres, and discourse practices, making them especially relevant for professional and vocational training (Belcher, 2012; Hafner & Miller, 2018; Salmani-Nodoushan, 2020; Hyon, 2017). Within this framework, English for Journalism requires learners to extend beyond linguistic accuracy and engage in communicative tasks that reflect authentic newsroom practices, including analyzing sources, evaluating information, collaborating in editorial teams, and producing content for diverse audiences under time-sensitive conditions (Chernii et al., 2020; Yuanti, 2014; Tzoannopoulou, 2015; Saed et al., 2022). However, in many vocational contexts, ESP curricula are constrained by rigid structures and policy-driven limitations, which restrict opportunities to integrate authentic professional practices (Widodo, 2017; Purwanti, 2018). As a result, students often receive fragmented exposure to professional competencies—developing linguistic skills without sufficient engagement in integrated processes of critical thinking, collaboration, and production that mirror newsroom realities.

Project-Based Learning (PBL) has gained prominence as a pedagogical approach that bridges classroom instruction with the demands of professional practice, particularly in ESP contexts (Indrasari, 2016; Kristianti & Yp, 2023; Andanty, 2020; Wiranegara, 2019). Rooted in constructivist learning theory, PBL emphasizes student-centered engagement through extended projects that require critical inquiry, collaboration, and problem-solving (Eswaran, 2024; Kek & Huijser, 2017; Almulla, 2020). In journalism education, this approach is particularly relevant, as authentic tasks such as news gathering, editorial decision-making, and content production closely parallel professional newsroom projects (Steensen, 2016; Breeze & Guinda, 2017; Basilan & Padilla, 2023; Sulaymanova, 2025). Within this framework, Crewpers—a student-developed journalism website created as part of a vocational English for Journalism course at a public polytechnic in Indonesia—was designed not merely as a digital writing tool, but as an educational newsroom that operationalizes PBL principles. The platform replicates editorial workflows by enabling students to plan, draft, revise, design, and publish content collaboratively, thereby integrating linguistic competence with professional practice. By engaging in these tasks, learners assume responsibility for shaping the direction and outcomes of their work, while simultaneously developing transferable competencies such as teamwork, creativity, adaptability, and decision-making under pressure (Viswambaran & Shafeek, 2019; Jabarullah & Hussain, 2019; Megayanti et al., 2020). Through its alignment with the teaching factory model, Crewpers situates language learning within authentic vocational contexts, positioning students as novice professionals whose work is accountable to real audiences and reflective of industry practices.

Recent scholarship on English for Journalism within ESP highlights the growing need to integrate language learning with digital innovation, professional competencies, and vocational relevance. Sulaymanova (2025) underscores how the digitalization of journalism requires pedagogical models that merge language instruction with digital tools, AI applications, and newsroom simulations to enhance proficiency, critical thinking, and digital literacy. Saed et al. (2022), through a corpus-based study, developed a COVID-19-related lemmatized word list, offering a valuable linguistic resource for journalism and health communication learners, while Breeze and Guinda (2017) propose genre-based strategies that foster critical and creative thinking across journalism and engineering, demonstrating genre as a bridge between disciplinary knowledge and transferable soft skills. In the vocational context, Purwanti (2018) reveals that ESP implementation in Indonesian

vocational schools remains vague and overly general under Curriculum 2013, with issues in course design, objectives, teacher competence, and materials, highlighting the need for curriculum redesign. Meanwhile, Basilan and Padilla (2023) show that campus journalism advisers face challenges in teaching English skills and managing publication tasks, prompting the development of digitized activities to strengthen language teaching practices. Finally, Viswambaran and Shafeek (2019) confirm the potential of Project-Based Learning (PBL) in vocational education, showing its positive impact on student engagement, confidence, and deep learning, thereby supporting its use in contexts where workplace simulation is critical.

Research in ESP and journalism education has increasingly emphasized the need to integrate digital tools, genre-based pedagogy, and project-based learning to prepare students for contemporary media environments. Studies have explored the use of corpus-informed resources, interdisciplinary collaboration, and innovative classroom activities, yet vocational English for Journalism often continues to provide only partial exposure to the realities of newsroom practice, with limited opportunities for students to engage in collaborative, role-distributed, and audience-oriented production tasks. Responding to this challenge, Crewpers was developed as a student-driven digital journalism platform within a vocational English for Journalism course at Politeknik Negeri Padang. Designed as an educational newsroom, it enables learners to perform integrated editorial functions such as planning, drafting, revising, designing, and publishing content in ways that replicate authentic professional workflows.

Through these processes, students are positioned not only as language learners but also as novice professionals working toward real communicative outcomes, thus aligning language instruction with the principles of project-based learning and the teaching factory model. Building on this innovation, the present study aims to evaluate the effectiveness of Crewpers in vocational ESP instruction by examining students' perceptions of their abilities in critical thinking, collaboration, journalistic production, and communication before and after its use; identifying platform features that most strongly support learning gains; analyzing how the platform contributes to course objectives consistent with vocational education; and assessing its usability, engagement, and instructional value in supporting professional skill development.

METHOD

This study employed a quasi-experimental design with a single-group pretest–posttest model to evaluate the effectiveness of Crewpers as a project-based learning platform in vocational English for Journalism. This design was selected because it allows researchers to examine changes over time within the same group in natural classroom contexts where random assignment is not feasible (Shadish et al., 2002; Ary et al., 2018). By measuring participants at two points—before and after the intervention—it was possible to capture differences in student perceptions attributable to the instructional treatment (Creswell & Guetterman, 2019; Dimitrov & Rumrill, 2003). Such designs are widely applied in educational research to assess the impact of innovative pedagogies and digital platforms when control groups are impractical (Gall, 2007). The study was conducted with 16 students enrolled in the Workshop on Journalism course, part of the D4 English for Business and Professional Communication program at a public institution in Padang, Indonesia.

Participants were selected using a total sampling technique since the course was delivered to a single intact class, a method suitable for small populations to maximize representativeness and avoid sampling bias (Etikan et al., 2016; Creswell & Creswell, 2018). All students were actively engaged in the course and given equal access to the Crewpers platform throughout the instructional period, ensuring uniform exposure to the intervention. No control group was included, as the study sought to capture perceptual change within a single cohort, a common practice in quasi-experimental classroom studies where randomization is neither feasible nor ethical (Ary et al., 2019).

The primary instrument for data collection was a structured questionnaire consisting of 16 items, grouped into four dimensions: Critical Thinking, Collaboration, Journalistic Production, and Communication. Each dimension was represented by four items designed to measure students' self-perceived competencies in relation to the course learning outcomes. A 5-point Likert scale was employed (1 = Strongly Disagree to 5 = Strongly Agree) to capture variations in students' perceptions with sufficient sensitivity and ease of interpretation, as Likert-type instruments are widely recognized for their reliability and suitability in educational research (Joshi et al., 2015; Boone & Boone, 2012). To examine perceptual changes over time, the questionnaire was administered twice: once as a pretest at the beginning of the course and again as a posttest at the end, following the full implementation of the Crewpers platform. This repeated-measures approach allowed for comparative analysis of students' self-assessed development, which is an established method for capturing shifts in attitudes and perceptions in quasi-experimental educational designs (Creswell & Guetterman, 2019).

The questionnaire was specifically developed and contextualized for this study, drawing on frameworks from prior perception-based research on digital learning tools and project-based learning environments to ensure relevance. Content validity was established through expert review by two faculty members specializing in journalism and instructional design, following best practices in instrument validation where expert judgment is recommended for ensuring construct clarity and contextual appropriateness (Taherdoost, 2016). To ensure accessibility and maintain respondent anonymity, the questionnaire was distributed electronically via Google Forms, a method increasingly adopted in educational research for its efficiency and ease of data collection (Evans & Mathur, 2018).

Data collected from the pretest and posttest questionnaires were exported into IBM SPSS Statistics for analysis, as this software is widely recognized in the social sciences for its robust capabilities in data management and inferential testing (Pallant, 2020; Field, 2018). To evaluate whether students' self-perceptions changed significantly after engaging with the Crewpers platform, a paired-sample t-test was performed for each of the four dimensions: critical thinking, collaboration, journalistic production, and communication. The paired-sample t-test is appropriate for pretest–posttest designs because it compares the means of two related measurements taken from the same participants, thereby identifying whether observed changes are statistically significant (Gravetter & Wallnau, 2019). Prior to conducting the test, assumptions of normality were examined to ensure the validity of the analysis, following recommended practices for parametric testing with small samples. The significance threshold was set at $p < .05$, a conventional criterion in educational research for determining whether differences are unlikely to have occurred by chance (Cohen, 2013). This analytical framework reflects established methodological standards for evaluating

pretest–posttest data collected via Likert-scale instruments in quasi-experimental educational designs (Creswell & Creswell, 2018).

FINDING AND DISCUSSION

Descriptive statistics of student perceptions before and after using Crewpers

Descriptive statistical analysis was conducted to provide an initial overview of students' perceived competencies across four key areas—critical thinking, collaboration, journalistic production, and communication—both before and after engaging with the *Crewpers* platform. These dimensions were directly aligned with the intended learning outcomes of the *Workshop on Journalism* course and reflected core competencies considered essential in project-based media education. Each dimension was operationalized through four questionnaire items, producing a total of 16 items, and responses were collected on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). For analysis, aggregate scores were calculated for each dimension per participant to enable comparison of pretest and posttest results.

Table 1. Descriptive statistics of student perceptions

Dimension	Pretest Mean	Pretest SD	Post-test Mean	Post-test SD
Critical Thinking	16.00	2.65	19.00	1.41
Collaboration	16.38	2.47	19.25	1.35
Journalistic Production	15.25	2.51	18.69	1.76
Communication	16.44	2.65	19.06	1.56

The descriptive results indicate a consistent improvement in students' self-perceived competencies across all four dimensions following the implementation of the *Crewpers* platform. In critical thinking, the mean score increased from 16.00 (SD = 2.65) at the pretest to 19.00 (SD = 1.41) at the posttest, suggesting that students felt more capable of analyzing, evaluating, and synthesizing information after the intervention. Similarly, in collaboration, the mean rose from 16.38 (SD = 2.47) to 19.25 (SD = 1.35), reflecting stronger perceptions of their ability to work effectively in teams, divide tasks, and coordinate efforts. The largest gain was observed in journalistic production, where the mean improved from 15.25 (SD = 2.51) to 18.69 (SD = 1.76), indicating enhanced confidence in producing news content that meets journalistic standards. In communication, the mean increased from 16.44 (SD = 2.65) to 19.06 (SD = 1.56), showing improvement in students' ability to adapt their communication style to different contexts and audiences.

Normality testing

Before conducting inferential statistical tests to examine the significance of perceptual changes, it was necessary to assess whether the data met the assumption of normality. Establishing normality is crucial for determining the suitability of parametric tests, such as the paired-sample t-test, or the need to employ a non-parametric alternative, such as the Wilcoxon signed-rank test. To evaluate this assumption, a One-Sample Kolmogorov–Smirnov (K–S) test was conducted on the unstandardized residuals of the difference scores between pretest and posttest values. The results of the K–S test are presented in Table 2.

Table 2. One-sample kolmogorov–smirnov test

	Unstandardized Residual
N	4

Normal Parameters[a.b]	Mean	0E-7
	Std. Deviation	.08774056
Most Extreme Diffrences	Absolute	.216
	Positive	.216
	Negative	-.213
Kolmogorov–Smirnov Z		.413
Asymp. Sig. (2-tailed)		.992

a. Test distribution is Normal
b. Calculated from data

The results of the One-Sample Kolmogorov–Smirnov (K–S) test confirmed that the residuals from the pretest–posttest differences across the four learning dimensions followed a normal distribution. With N = 4, the test indicated a mean value close to zero and a standard deviation of 0.0877, suggesting that the residuals were tightly clustered around the mean. The most extreme differences between the observed and expected normal distribution were minimal (absolute = 0.216), and the Kolmogorov–Smirnov Z statistic was 0.431 with an associated significance value of p = .992, far above the conventional threshold of 0.05. This finding means the null hypothesis of normality could not be rejected, implying that the distribution of residuals did not deviate significantly from normality. As a result, the assumption of normality was satisfied, and the use of a parametric test, specifically the paired-sample t-test, was deemed appropriate for evaluating changes in students' perceptions before and after the intervention.

Paired Sample Analysis for Each Perception Dimension

After confirming the normal distribution of pretest–posttest difference scores using the Kolmogorov–Smirnov test, a paired-samples t-test was conducted to examine whether the changes in student perceptions were statistically significant across the four learning dimensions: critical thinking, collaboration, journalistic production, and communication. The results of the paired-samples t-tests are summarized in Table 3.

Table 3. Paired sample t-test

	Paired Diffrences					**t**	**df**	**Sig. (2-tailed)**
	Mean	Std. Dev	Std. Mean Error	95% Confidence Interval of the Diffrence				
				Lower	Upper			
X1 – Y1 (Critical Thinking)	-3.00	1.789	0.447	-3.953	-2.047	-6.70	15	.000
X2 – Y2 (Collaboration)	-2.87	1.668	0.417	-3.764	-1.986	-6.89	15	.000
X3 – Y3 (Journalistic Production)	-3.43	1.365	0.341	-4.165	-2.710	-10.07	15	.000
X4 – Y4 (Communication)	-2.62	1.628	0.407	-3.492	-1.758	-6.45	15	.000

The results of the paired-samples t-test demonstrated statistically significant improvements across all four learning dimensions following the implementation of the *Crewpers* platform. In critical thinking (Pair 1), the mean difference was -3.00 (SD = 1.789),

$t(15) = -6.708$, $p < .001$, indicating that students reported a substantial increase in their ability to analyze and evaluate information critically. In collaboration (Pair 2), the mean difference was -2.88 (SD = 1.668), $t(15) = -6.893$, $p < .001$, reflecting stronger perceptions of teamwork, task coordination, and group responsibility. The largest gain was observed in journalistic production (Pair 3), with a mean difference of -3.44 (SD = 1.365), $t(15) = -10.075$, $p < .001$, suggesting that the platform was particularly effective in enhancing students' confidence and competence in producing publishable journalistic content. In communication (Pair 4), the mean difference was -2.63 (SD = 1.628), $t(15) = -6.450$, $p < .001$, showing improvement in adapting communication styles, both in group interaction and in content delivery to audiences. Across all dimensions, the negative mean differences reflect higher posttest scores compared to pretest scores, while the consistently low *p*-values confirm that these improvements were highly significant.

DISCUSSION

This study set out to evaluate the effectiveness of Crewpers, a student-developed journalism platform, in enhancing vocational learners' perceptions of critical thinking, collaboration, journalistic production, and communication skills within a Project-Based Learning (PBL) framework. The results revealed statistically significant improvements across all four dimensions, confirming the platform's pedagogical value. Beyond statistical outcomes, the magnitude of the gains—such as a 15% increase in collaborative self-ratings—reflects meaningful growth in practical communication and teamwork competence, which are essential in ESP-journalism contexts (Chernii et al., 2020; Yuanti, 2014; Sulaymanova, 2025). These findings resonate with the broader literature on PBL, which emphasizes the importance of authentic, task-based learning in stimulating higher-order thinking, fostering collaborative practices, and bridging academic instruction with professional performance (Almulla, 2020; Eswaran, 2024; Kristianti & Yp, 2023; Viswambaran & Shafeek, 2019).

With respect to critical thinking, the improvement suggests that the authentic editorial workflows embedded in *Crewpers* encouraged deeper cognitive engagement. By researching, drafting, and revising news articles for publication, students were compelled to evaluate sources, analyze competing perspectives, and justify editorial decisions—cognitive tasks aligned with higher-order thinking (Breeze & Guinda, 2017). These findings align with the argument that when learners are held accountable to a real audience, they develop stronger analytical and reflective skills than in conventional classroom settings (Lilawati & Ni'mah, 2024; Sulaymanova, 2025). In terms of collaboration, the platform required students to work in editorial teams with clearly defined roles such as editor, journalist, and social media manager. This structure mirrored professional newsroom practices and compelled learners to negotiate meaning, distribute tasks, and solve problems collectively (Breeze & Guinda, 2017; Morgado & Vesala-Varttala, 2023). The increase in collaboration scores further parallels findings by Hishamuddin et al. (2025) and Boss and Krauss (2022), who argue that digital PBL environments foster interpersonal accountability and shared ownership of outcomes.

The most substantial gains were observed in journalistic production, which is unsurprising given that Crewpers was explicitly designed to replicate authentic newsroom practices. Students were not merely completing assignments but publishing 205 articles under their names, engaging real audiences as readers. This model reflects the "teaching

factory" approach, where education simulates professional practice and students internalize standards of accuracy, ethics, and editorial accountability (Rohaeni et al., 2021; Diwangkoro & Soenarto, 2020). Improvement in communication skills also emerged as a clear outcome of the intervention. Weekly editorial meetings, peer feedback sessions, and public-facing publication processes required students to refine verbal negotiation, written clarity, and audience adaptation, consistent with findings by Yusupalieva (2024) and Jain (2024), who emphasize that communication competence develops most effectively in environments that embed authenticity, feedback, and audience interaction. Beyond these discrete domains, the results reveal the interconnectedness of skills fostered through Crewpers. Students did not simply become better thinkers, collaborators, or communicators in isolation; rather, the platform supported integrative growth across cognitive, social, and professional dimensions. This resonates with arguments by Napitupulu et al. (2024), Rachmawati and Irawan (2024), and Li (2018), who contend that digital ESP pedagogy must move beyond fragmented competencies toward holistic professional capacities.

Notably, Crewpers also cultivated learner autonomy, as students were given responsibility to plan, execute, and evaluate their work in ways consistent with vocational education goals (Hua et al., 2011; Green & Du Plessis, 2023). Equally important was the platform's local relevance. Developed within the context of a public polytechnic in Indonesia, Crewpers represents what Gumartifa et al. (2025) describe as a "pedagogically fitted" tool, aligned with learners' digital literacies, motivations, and institutional contexts. This cultural and contextual grounding enhanced usability, minimized resistance, and promoted equitable participation, particularly since the platform was designed to be lightweight and accessible regardless of device or connectivity strength (Nechifor & Dimulescu, 2024; Pratiwi, 2022). The findings also affirm the alignment between Crewpers and the course's curricular intentions. The Workshop on Journalism emphasized production-oriented, collaborative, and communication-heavy objectives, and the results indicate that when mediated through Crewpers, students perceived themselves as successfully achieving these competencies. This outcome reinforces the argument of Cattaneo et al. (2021) that digital tools in vocational education should be evaluated primarily by their capacity to help learners meet defined professional benchmarks.

CONCLUSION

This study examined the effectiveness of Crewpers, a student-developed digital journalism platform, in supporting vocational English for Journalism within a Project-Based Learning (PBL) framework. The findings demonstrated statistically significant improvements in students' self-perceptions of critical thinking, collaboration, journalistic production, and communication, with the most substantial gains observed in journalistic production and collaborative competence. These outcomes suggest that embedding authentic newsroom simulations into ESP instruction can provide meaningful opportunities for students to integrate linguistic, cognitive, and professional skills. In addition, the platform's design—lightweight, accessible, and contextually relevant to a public polytechnic in Indonesia—appeared to contribute to its usability and alignment with curricular objectives.

Several limitations should be noted. The study was conducted with a small sample (n = 16) from a single institution, which constrains the generalizability of the results. The absence

of a control group also limits causal claims, as improvements may have been influenced by factors beyond the intervention. Furthermore, reliance on self-reported questionnaire data introduces the possibility of bias and does not capture actual performance quality. Future research should address these limitations by incorporating larger and more diverse participant groups across multiple institutions, as well as by employing mixed-methods approaches that include qualitative interviews, classroom observations, or content analysis of student work. Longitudinal studies would also be valuable in examining whether the skills fostered through Crewpers are sustained and transferable to professional journalism contexts. Exploring the integration of similar simulation-based platforms into other ESP domains could further clarify the broader pedagogical potential of digital, project-oriented learning environments.

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