

The Role of Multiliteracies in Enhancing the ESP Curriculum at Vocational High Schools

Andi Asrifan^{1,*}, & Luís Miguel Oliveira de Barros Cardoso²

¹Graduate Program, Universitas Negeri Makassar, Indonesia

²Polytechnic Institute of Portalegre, Praça do Município, Portugal

*Corresponding email: andi.asrifan@unm.ac.id

Received: 26 March 2025

Accepted: 12 June 2025

Published: 24 September 2025

Abstract: The Role of Multiliteracies in Enhancing the ESP Curriculum at Vocational High Schools. Integrating multiliteracies in English for Specific Purposes (ESP) education presents both challenges and opportunities in vocational high schools in South Sulawesi. **Objective:** This study investigates the effect of multiliteracies on enhancing the ESP curriculum at vocational high schools in South Sulawesi. This study aims to assess how multiliteracies can enhance student engagement and language proficiency in vocational education, while also addressing the specific challenges of implementation in Indonesia's peripheral regions, with an emphasis on aligning digital competencies and regional socio-cultural contexts. **Methods:** A convergent parallel mixed-methods design was utilized. Quantitative data were collected through an ESP proficiency examination and a multiliteracy survey, which involved 100 students and 10 teachers. Qualitative data were obtained from teacher interviews, student focus groups, and document analysis. Inferential analysis employed statistical tools such as Pearson correlation, t-tests, chi-square tests, and Confirmatory Factor Analysis, whereas qualitative interpretation was facilitated through thematic coding using *Nvivo* software. **Findings:** The results indicate that 85% of students experienced increased engagement, while 75% demonstrated enhanced ESP performance after the integration of multiliteracies. Nonetheless, hardly 40% of teachers perceived themselves as sufficiently trained to execute these tactics. Essential qualitative observations highlighted the significance of culturally relevant content, including the incorporation of Bugis-Makassar maritime expertise, and the utilization of collaborative, multimodal resources. Teachers and students emphasized both the pedagogical advantages and the infrastructural and training constraints that impede full implementation. **Conclusion:** The integration of multiliteracies into the ESP curriculum shows significant promise for enhancing vocational language teaching in South Sulawesi. It enhances students' communicative skills and promotes participation through culturally relevant and technologically advanced content. Nonetheless, successful implementation necessitates focused teacher training, policy endorsement, and curriculum modification grounded in local values such as *siri' na pacce*. Future studies should focus on the longitudinal effects and scalable professional development models within Indonesia's diverse educational environments.

Keywords: multiliteracies, english for specific purposes (ESP), vocational education, student engagement, curriculum development.

To cite this article:

Asrifan, A., & Cardoso, L. M. O. D. B. (2025). The Role of Multiliteracies in Enhancing the ESP Curriculum at Vocational High Schools. *Jurnal Pendidikan Progresif*, 15(3), 1953-1969. doi: 10.23960/jpp.v15i3.pp1953-1969.

■ INTRODUCTION

The significance of English as a global lingua franca in contemporary education is crucial

(Ebrahimi, 2023; Walker & Qian, 2022). As businesses and economies become increasingly interconnected, the demand for proficient English

speakers, particularly in specialized fields, has risen significantly. ESP has evolved into an essential domain of language education, designed to equip learners with the necessary linguistic skills tailored to specific professional contexts (Dou et al., 2023; Maouche, 2021). ESP programs are customized to meet the diverse needs of learners, irrespective of their professional fields in business, healthcare, engineering, or technology. The incorporation of ESP into the curriculum of vocational high schools in South Sulawesi is particularly pertinent for workforce readiness. These institutions are responsible for aligning educational outputs with industry requirements, ensuring that students have both technical skills and communicative competencies essential for success in their particular fields.

Despite the growing recognition of the importance of ESP, traditional teaching methods often dominate vocational language education. Numerous educators continue to employ conventional approaches that emphasize language and vocabulary rather than actual application and genuine communication (AlGerafi et al., 2023; Tafazoli, 2024; Valledor et al., 2023). This reliance on outdated approaches might hinder students' ability to effectively use English in professional environments, leaving them poorly prepared for the demands of the labor market. Furthermore, the rapid progression of technology and communication techniques in the 21st century has transformed the way individuals engage with language. In this context, it is crucial to reassess the technique of English instruction, particularly in vocational education, where students face a complex set of literacy demands.

A significant approach that has arisen in recent years is the notion of multiliteracies. The New London Group posits that multiliteracies recognize the various communication modalities and cultural contexts that affect personal learning and linguistic engagement. Nevertheless, current research has primarily focused on urban or

mainland regions, with insufficient attention to peripheral or archipelagic parts of Indonesia. A comparative research by Irham & Wahyudi (2023) examined the integration of ESP and multiliteracies in vocational schools in Maluku, emphasizing distinct problems within maritime and multicultural environments. These perspectives are inadequately represented in South Sulawesi research, highlighting a substantial deficiency in examining the role of multiliteracies within Bugis-Makassar cultural contexts, particularly in coastal vocational institutions.

This study aims to integrate the New London Group's comprehensive global framework for multiliteracies with local values, specifically the Bugis-Makassar wisdom tradition of "siri' na pacce" (dignity and empathy), which significantly impacts communicative behavior and learning motivation. This integration asserts that a culturally adaptive multiliteracies paradigm is crucial for effective ESP curriculum creation in South Sulawesi. The study used the Pentahelix model, encompassing academia, industry, government, community, and media, as a comprehensive implementation framework. The study aims to develop a collaborative and sustainable methodology for curricular innovation by leveraging the synergy of these five pillars. Collaborations with local media can facilitate digital content development, the industry can supply contextual resources, and governmental programs can finance teacher training tailored to community requirements.

Furthermore, although this study's hypothesis suggests that the integration of multiliteracies improves students' engagement and proficiency in ESP, this assertion has not been definitively supported by preliminary data. The research conducted an initial needs analysis through pilot interviews and diagnostic surveys in five vocational high schools in coastal and urban Makassar, indicating that over 60% of students preferred learning materials with multimedia

content. In contrast, 70% of teachers faced difficulties in contextualizing ESP lessons to the students' local environments. These findings validate the study's major hypothesis and highlight the importance of developing a culturally informed multiliteracies framework.

This study aims to address these deficiencies by examining the impact of multiliteracies on enhancing the ESP curriculum in vocational high schools in South Sulawesi. This study will examine educators' existing methodologies and students' experiences to determine successful techniques for incorporating multiliteracies into English for Specific Purposes instruction. This study aims to elucidate the challenges and opportunities related to multiliteracies in ESP training through a mixed-methods approach that integrates qualitative interviews and quantitative surveys.

Research Questions

1. How do educators and students in vocational high schools in South Sulawesi perceive the integration of multiliteracies in ESP curriculum?
2. What challenges and opportunities arise in implementing multiliteracies in ESP instruction across different vocational contexts?
3. How can the Pentahelix model be leveraged to support the sustainable implementation of multiliteracies in vocational ESP programs?

This research aims to address deficiencies in the literature and provide practical insights for educators, consequently improving the relevance and effectiveness of the ESP program designed for vocational students in South Sulawesi. This study aims to promote a holistic approach to language teaching that acknowledges the diverse communication needs of learners in an increasingly interconnected world. It aims to enrich students' educational experiences and equip them to become proficient communicators in their fields, enabling them to navigate the challenges of the modern workforce.

Integrating multiliteracies into the English for Specific Purposes (ESP) curriculum represents a promising strategy for enhancing language instruction in vocational high schools. By acknowledging and embracing the intricate nature of communication, educators may foster more engaging and effective learning environments that prepare students for the challenges they will encounter in their professional careers (Carroll et al., 2021; Cheung et al., 2021; Rusticus et al., 2023). This study will significantly advance the objective, contributing to the ongoing discourse regarding the importance and effectiveness of ESP within the context of vocational education in South Sulawesi.

■ METHOD

Research Design

This study utilized both qualitative and quantitative methodologies to examine the influence of multiliteracies on the ESP curriculum in vocational high schools in South Sulawesi. Mixed methodologies facilitated data triangulation and a comprehensive examination of research themes (Meydan & Akka^o, 2024; Mrabti & Alaoui, 2024; Walsh & Foster, 2024). The research employed qualitative data from interviews and focus groups, with quantitative data from surveys, to examine multiliteracies and their influence on ESP instruction. Employing mixed techniques is advantageous for tackling the intricacies of research subjects (Åkerblad et al., 2021; Gupta et al., 2024). Qualitative approaches enable researchers to investigate the perspectives, experiences, and challenges of instructors and students on the implementation of multiliteracies in the ESP curriculum (Beltrán-Palanco, 2024; Cheraghi & Motaharnejad, 2023; Lee et al., 2021). Conversely, quantitative methods yield measurable data regarding student engagement, as well as trends, patterns, and correlations in language proficiency. This comprehensive approach enhances data validity and helps

vocational students incorporate multiliteracies into English for Specific Purposes instruction.

Participants

The sample in this study comprises selected instructors and students from vocational high schools in South Sulawesi. It concentrates on institutions that offer ESP education. These institutions exemplify the region's vocational education framework by their commitment to modern pedagogical approaches and varied student demographics. The participants included educators and students. Selection requires a

minimum of two years of experience in ESP instruction and multiliteracies education. Students who have completed one semester of English language instruction and were enrolled in ESP courses are eligible. Approximately ten educators and 100 students from vocational high schools participated in the study. The demographic data include age, gender, and educational qualifications. This clarifies the sample's diverse experiences and viewpoints, enabling a thorough analysis of the perception and use of multiliteracies within the ESP curriculum across South Sulawesi.

Table 1. Participant description

Category	Selection Criteria	Number of Participants	Demographics
Schools	Vocational High Schools	5	Located in South Sulawesi
	Have an ESP program		Represent various vocational fields
	Integrate multiliteracy practices		
Teachers	Selection Criteria	10	Age: 30-50 years
	Minimum of 2 years teaching experience in ESP		Gender: 60% Male, 40% Female
	Familiar with multiliteracy practices		Educational Background: Bachelor's degree in English Education or related fields
Students	Selection Criteria	100	Age: 15-18 years
	Enrolled in ESP courses		Gender: 50% Male, 50% Female
	Completed at least one semester of instruction		Educational Background: Students from various vocational programs

Instrument of the Research

This research utilized both evaluative and non-evaluative tools to gather data. The ESP ability Test, a cognitive tool, was created to evaluate students' ability in English for Specific Purposes (ESP) with 30 items encompassing four indicators corresponding to CEFRA2–B1 levels. The components comprised: (1) Vocabulary Comprehension (8 items), which involved

selecting the appropriate term corresponding to a hotel job description; (2) Reading Comprehension (8 items), illustrated by interpreting maritime training announcements; (3) Listening Skills (7 items), focusing on the discernment of specifics in workplace-related audio dialogues; and (4) Speaking Self-Assessment (7 items), utilizing Likert scales to evaluate students' confidence and fluency in

articulating job-related subjects. The instrument was adapted and contextualized according to recognized ESP frameworks (Chen, 2025; Cope & Kalantzis, 2023), evaluated by specialists to ensure content validity, and produced a Cronbach's Alpha of 0.87, signifying strong reliability.

The Student Survey on Multiliteracies, a non-assessment tool, had 25 Likert-scale items across five markers of multiliteracy domains: (1) Digital Literacy (6 items), evaluating proficiency in tools such as *Google Docs* and *Canva*; (2) Visual Literacy (5 items), assessing abilities in interpreting infographics and creating visual content; (3) Cultural Awareness (5 items), measuring comprehension of texts from diverse cultural backgrounds; (4) Critical Thinking in Media (4 items), concentrating on the assessment of online information; and (5) Collaborative Practices (5 items), emphasizing engagement in digital group activities. The instrument, adapted from García-Barroso & Fonseca (2023) and Mutiaraningrum (2024), was adapted for vocational high school environments, verified by three experts, and attained a Cronbach's Alpha of 0.89.

Furthermore, qualitative instruments included a teacher interview protocol featuring 10 open-ended questions regarding perceptions, challenges, and strategies for implementing multiliteracies, as well as a student focus group guide containing eight prompts related to the utilization of digital media, classroom engagement, and collaboration in ESP. Both were independently constructed based on Lee et al. (2021) and evaluated by professionals in qualitative research. These instruments collectively provided comprehensive, multidimensional data for processing, exhibiting robust internal consistency and reliability for both qualitative and quantitative research.

Data Collection Methods

This study utilized Creswell's (2014) convergent parallel mixed-methods design to

triangulate and analyze the research problem through quantitative and qualitative data. The combination of quantitative and qualitative data, along with separate examination and subsequent synthesis during interpretation, enhanced the validity and depth of the conclusions. The quantitative study included data from a multiliteracy survey and an ESP competency examination. Descriptive statistics, including mean, percentage, and standard deviation, summarized participant responses. Exploring complex data relationships required the use of multiple inferential statistical methods. A Pearson correlation study evaluated students' multiliteracy and ESP abilities. A chi-square test was performed to examine instructor viewpoints and integration challenges. A paired-sample t-test was used to compare pre- and post-test ESP ratings and assess student performance. Confirmatory Factor Analysis (CFA) performed using *SPSS AMOS* evaluated the construct validity of the multiliteracy questionnaire. A Comparative Fit Index (CFI) greater than 0.90, RMSEA less than 0.08, and normalized factor loadings exceeding 0.5 validated model fit.

The qualitative component consisted of semi-structured interviews with ten ESP instructors, five focus group discussions with forty students, and a review of documents, including lesson plans and student projects that illustrated multiliteracies in the classroom. Prolonged involvement in the field for two months, continuous observation and reflective note writing, triangulation of data sources, and peer debriefing with fellow researchers enhanced analytical rigor to ensure the validity of qualitative findings.

Miles & Huberman (2014) introduced a methodical framework for qualitative data analysis. Data collection commenced with interviews, group discussions, and document transcripts. Subsequently, raw transcripts were meticulously cleaned, tagged, and categorized into principal topics such as "teacher challenges," "student engagement," and "collaborative

literacy.” Matrices, tables, and thematic charts illustrate these concepts with pertinent quotations to construct a compelling narrative. The subsequent phase involved deriving conclusions and triangulating quantitative data to guarantee internal consistency and interpretative coherence. *NVivo software* facilitated the thematic organization of qualitative data. The research findings were valid and reliable, owing to the structured methodology that yielded robust and context-sensitive insights into the application of multiliteracies in English for Specific Purposes instruction in vocational high schools in South Sulawesi.

■ RESULT AND DISCUSSION

Qualitative Results (Educators)

The qualitative data obtained from semi-structured interviews with educators provided substantial insights into the incorporation of multiliteracies within the ESP curriculum. The research revealed three principal themes: educators’ perspectives on multiliteracies, obstacles encountered in integration, and methods for successful implementation.

Themes Identified from Interviews with Educators

Theme 1: Educators’ Perceptions of Multiliteracies

Most teachers expressed enthusiasm about the potential of multiliteracies but acknowledged limitations in their preparedness and access to resources. One teacher noted, “*I see students more engaged when I use videos or infographics, but I do not always know how to integrate them meaningfully.*” Teachers often relied on informal collaboration with peers to share digital tools and strategies. This illustrates a bottom-up adaptation process shaped by school culture and personal initiative.

These findings align with constructivist learning theory, which posits that learners actively construct knowledge through meaningful

interaction with contextually relevant content. The efforts of educators to alter and collectively enhance teaching strategies indicate a shift from traditional transmission models to learner-centered approaches. The results support the New London Group’s multiliteracies theory, specifically the concept of ‘situated practice’ which posits that learning occurs within authentic social and cultural contexts. In this study, educators sought to match learning activities with students’ vocational contexts, highlighting the need for contextualized pedagogy in vocational education.

Theme 2: Challenges in Integrating Multiliteracies into ESP

Students exhibited increased motivation and confidence when exposed to multimodal materials. A student from a maritime program reflected, “*When we watched a video on ship safety protocols and had to create a digital poster, I understood the vocabulary better and felt more confident.*” These activities fostered a sense of agency, particularly when tasks allowed students to express themselves visually or digitally. Engagement was strongest when materials reflected their vocational field and daily realities.

However, this engagement was not culturally neutral. In South Sulawesi, social values such as *siri*’ (dignity and self-respect) and *pacce* (empathy and collective responsibility) significantly influence classroom dynamics. Students often avoid public disputes or explicit criticism, which may affect the execution of peer-based learning prevalent in multiliteracies. Some students indicated anxiety with peer review assignments, perceiving them as potentially insulting. Educators indicated that they modified their methodologies by employing anonymous feedback mechanisms or organized group reflections to preserve cultural cohesion. These findings underscore that although multiliteracies foster involvement, they must be culturally contextualized to be effective. Educators must align instructional methods with local

standards to ensure that learning is respectful, inclusive, and socially relevant.

Theme 3: Strategies for Effective Implementation

Another insight was the importance of local relevance. Students and teachers emphasized the value of integrating *Bugis-Makassar* cultural elements into multiliteracies. A teacher shared, “*When we discuss traditional maritime practices in English, students are proud and more engaged.*” Such examples suggest that the inclusion of culturally grounded content enhances both comprehension and affective connection to learning. Despite these promising strategies, the implementation process was not without resistance. Several educators expressed concerns about increased workloads, particularly when tasked with creating digital content from scratch. A teacher explained, “*Designing tasks that include videos or infographics takes more time than preparing standard worksheets.*” Furthermore, insufficient comprehension and training in multiliteracies instilled concern in many educators who were unacquainted with digital pedagogies. Students exhibited reluctance due to

apprehension regarding public speaking or the dissemination of creative works, which they viewed as subjecting them to scrutiny absent in conventional teaching methods. These dynamics highlighted the need to overcome emotional and practical obstacles in implementing instructional innovation.

To alleviate resistance, some schools established collaborative learning communities and informal peer mentoring programs. Technologically proficient teachers assisted colleagues in material production and disseminated effective classroom strategies. These community-oriented strategies correspond with the Pentahelix concept by highlighting collaborations within the educational ecosystem.

Collectively, these findings underscore the necessity of not merely supplying digital tools but also fostering local and pedagogical significance in the application of multiliteracies. This comprehensive analysis connects statistical trends with classroom realities, bolstering the study’s assertion for a culturally responsive and resource-enhanced application of multiliteracies in ESP contexts. The themes identified from educator interviews are presented in Table 2.

Table 2. Summary of themes identified from educator interviews

Theme	Key Insights
Educators’ Perceptions of Multiliteracies	Positive views on enhancing engagement and developing a broader skill set for students.
Challenges in Integrating Multiliteracies	Lack of resources, insufficient training, and adherence to standardized curricula as major barriers.
Strategies for Effective Implementation	Professional development, collaboration among educators, and the use of technology to enhance learning.

The study’s findings present persuasive evidence for the necessity of multiliteracies in English for Specific Purposes instruction. Anecdotal and quantitative research suggest that integrating various literacy techniques significantly improves student engagement and learning outcomes. The qualitative findings indicated that educators viewed multiliteracies as a method for

cultivating a more engaging and relevant learning environment. Students validated this viewpoint, exhibiting heightened passion and confidence in their language abilities as they engaged with diverse media formats, including videos, podcasts, and digital tools.

The robust positive correlation ($r = 0.68$, $p < 0.01$) between multiliteracy skills and ESP

competence underscores the effectiveness of these practices in promoting language acquisition. This aligns with modern educational theories that advocate for an expansive notion of literacy, acknowledging the need for learners to navigate a complex communication landscape in the 21st century. Incorporating multiliteracies into the ESP curriculum enables educators to effectively prepare students for real-world challenges, equipping them with the crucial skills necessary for success in various professional settings (Kustini, 2023; Mutiaraningrum, 2024).

The significant improvement in ESP proficiency ratings following the implementation of multiliteracy strategies highlights the concrete benefits of this approach. The paired sample t-test demonstrated a statistically significant improvement in students' language proficiency, suggesting that multiliteracies engage children and lead to measurable academic success (Karkar-

Esperat, 2025; Ogundiwin et al., 2024). This result underscores the need for language education to adapt to the evolving demands of the workforce, where proficiency in multiple communication modalities is increasingly valued.

Quantitative Results (Educators)

The quantitative analysis of survey data collected from educators and students provided substantial insights into their views and experiences about the integration of multiliteracies in the English for Specific Purposes (ESP) curriculum. This section presents descriptive data, including a demographic overview of participants and a summary of survey responses.

This survey involved 150 participants, comprising 10 teachers and 140 students from diverse vocational high schools in South Sulawesi. Table 3 summarizes the demographic characteristics of the participants.

Table 3. Demographic overview of participants

Category	Subcategory	Frequency	Percentage (%)
Educators	Male	6	60%
	Female	4	40%
	Age 30-40 years	5	50%
	Age 41-50 years	5	50%
Students	Male	70	50%
	Female	70	50%
	Age 15-17 years	80	57%
	Age 18-20 years	60	43%

The demographic data reveal equitable gender representation among educators and students, with the majority of pupils aged 15 to 17. The age distribution of educators exhibits an equal division between individuals aged 30-40

and those aged 41-50, ensuring a diverse range of experience levels. The questionnaire included questions assess participants' views on the effectiveness of multiliteracies in enhancing ESP learning outcomes. Table 4 represents the principal findings.

Table 4. Summary of survey responses

Survey Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean Score
Multiliteracies enhance student engagement.	2%	3%	10%	30%	55%	4.35

Multiliteracies improve language proficiency.	1%	4%	8%	35%	52%	4.32
I feel adequately trained to implement multiliteracies.	15%	20%	25%	30%	10%	2.95

The results indicate that 85% of participants agreed or strongly agreed that multiliteracies enhance student engagement, resulting in a mean score of 4.35. Similarly, 87% claimed that multiliteracies improve language proficiency, resulting in a mean score of 4.32. Nevertheless, only approximately 40% saw themselves as adequately trained to implement multiliteracies, as indicated by a mean score of 2.95, underscoring a significant opportunity for improvement.

A correlational study was conducted to investigate the correlation between perceived efficacy of multiliteracies and self-reported training levels. The Pearson correlation coefficient indicated a moderate negative association ($r = -0.45$, $p < 0.05$) between the perceived efficacy of multiliteracies in improving engagement and the self-evaluation of training sufficiency. This suggests that individuals who perceive their training as inadequate are more likely to view multiliteracies as less effective.

The quantitative results underscore the beneficial effects of multiliteracies on student engagement and language proficiency, while also revealing a significant necessity for improved training for educators to integrate these methods into the ESP curriculum adeptly. Addressing this training gap is crucial for optimizing the benefits of multiliteracies in vocational education.

The research highlights the benefits of multiliteracies and the challenges that educators and students encounter in their implementation. Educators identified inadequate resources and training as obstacles to integrating multiliteracies into their instruction. The quantitative data indicate that just 40% of teachers felt equipped to execute

multiliteracy initiatives. Targeted professional development is essential for providing educators with the competencies and understanding required to incorporate multiliteracies into their instruction (Ramírez-Montoya et al., 2021; Sancar et al., 2021; Woulfin & Jones, 2021). Multiliteracy, digital literacy, and collaborative teaching workshops can facilitate innovation among educators. Establishing a collaborative network of educators can enhance the ESP program through the exchange of best practices and resources. The demand for additional digital tools and training in collaborative activities among pupils highlights the need for a multiliteracies-oriented curriculum that actively engages students. Facilitating collaborative projects using diverse media can provide a more participatory and engaging educational environment (Haleem et al., 2022; Langedård et al., 2021).

Multiliteracies within the ESP curriculum can enhance language instruction in vocational high schools. By addressing the concerns of educators and students and recognizing the significance of multiliteracies in equipping students for the contemporary workforce, educators can develop a more pertinent and successful learning experience that prepares students for their future careers. This study proposes an innovative methodology for teaching ESP and emphasizes the necessity for continuous pedagogical support and creativity.

Qualitative Results (Students)

The focus group discussions with students provided valuable insights into their experiences with multiliteracies within the ESP curriculum.

Three primary themes emerged from the discussions: student engagement with multiliteracies, the impact on learning outcomes, and suggestions for improvement.

Themes Identified from Focus Group Discussions with Students

Theme 1: Student Engagement with Multiliteracies

Students exhibited considerable engagement when multiliteracies were integrated into their ESP sessions. The incorporation of various elements, such as films, podcasts, and interactive digital platforms, improved the enjoyment and significance of the learning experience. A student stated, *“Employing films and applications in class enhances understanding and engagement with the language.”* Approximately 85% of students expressed an increased motivation to engage in sessions that utilized multiliteracies. This connection correlated with heightened interest in the material and more active engagement in the learning process.

Theme 2: Impact on Learning Outcomes

The students indicated a beneficial effect on learning outcomes due to their engagement

with multiliteracies. Numerous participants observed improvements in their linguistic abilities, especially in speaking and listening, which they attributed to the diverse types of information they encountered. A student stated, *“Now I feel more assured in my speaking abilities in English because of our practice with authentic materials.”* The quantitative data from the study confirmed these findings, revealing that 75% of students noted an enhancement in their overall language ability as a result of including multiliteracies into their ESP sessions.

Theme 3: Suggestions for Improvement

Students acknowledged the importance of multiliteracies and offered recommendations for enhancement. Several participants expressed a need for more comprehensive training on the effective use of digital tools and resources in their education. Additionally, students proposed the integration of supplemental collaborative activities that foster mutual engagement and learning. A participant remarked, *“Collaborative projects utilizing technology would enhance our learning experience and increase enjoyment.”* This statement emphasizes the necessity of cultivating a collaborative learning environment that utilizes multiliteracies.

Table 5. Summary of themes identified from student focus group discussions

Theme	Key Insights
Student Engagement with Multiliteracies	High engagement levels were observed when using diverse materials; 85% reported an increase in motivation.
Impact on Learning Outcomes	Positive effects on language skills; 75% stated improved overall proficiency.
Suggestions for Improvement	Desire for more training on digital tools and collaborative learning activities.

Quantitative Results (Students)

The quantitative study focused on inferential statistics to analyze the relationships between multiliteracy abilities and ESP proficiency, as well as to compare pre- and post-implementation

results when applicable. This section outlines the findings of these analyses.

A Pearson correlation coefficient was calculated to assess the connection between students' multiliteracy skills and ESP proficiency.

One hundred forty pupils completed both the multiliteracy skills assessment and the ESP proficiency test. The findings are presented in Table 6.

An additional regression analysis was conducted to improve the investigation and address the complexities of variables influencing learning outcomes. This regression analyzed the

Table 6. Correlation between multiliteracy skills and ESP proficiency

Variable	Mean Score	Standard Deviation	Correlation Coefficient (r)	p-value
Multiliteracy Skills	4.10	0.62		
ESP Proficiency	3.85	0.75	0.68	< 0.01

anticipated relationship between students' multiliteracy skills (independent variable) and their competency in English for Specific Purposes (dependent variable). The results indicated that multiliteracy skills significantly predict ESP performance, accounting for nearly 46% of the variance ($R^2 = 0.46$, $\hat{a} = 0.68$, $p < 0.01$). This suggests that adolescents with advanced multiliteracy skills were more likely to demonstrate higher language proficiency, even when controlling for other characteristics. These

findings highlight the crucial importance of multiliteracies in improving academic and communication competence in ESP contexts.

A paired sample t-test was performed to assess the efficacy of multiliteracies in improving ESP proficiency by comparing students' scores before and after applying multiliteracy methods. The mean score prior to implementation was 3.45 (SD = 0.80), but the mean score after implementation was 4.10 (SD = 0.70). The findings are encapsulated in Table 7.

Table 7. Pre- and post-implementation ESP proficiency scores

Implementation Phase	Mean Score	Standard Deviation	t-value	p-value
Pre-Implementation	3.45	0.80	-6.52	< 0.01
Post-Implementation	4.10	0.70		

The paired sample t-test revealed a significant difference between pre- and post-implementation ratings ($t = -6.52$, $p < 0.01$). The study indicates that the application of multiliteracy methodologies resulted in a statistically significant enhancement in students' ESP competency. Inferential statistics reveal a significant correlation between the development of multiliteracy skills and the growth of ESP proficiency among students. The notable enhancement in ESP scores after implementing multiliteracy tactics highlights the efficacy of this method in vocational education. These findings underscore the need to incorporate multiliteracies into the ESP curriculum to enhance language acquisition outcomes.

The combination of qualitative and quantitative evidence offers a comprehensive understanding of the role of multiliteracies in enhancing the ESP curriculum in vocational high schools in South Sulawesi. This section examines the disparity between qualitative themes and quantitative data, the triangulation of data sources, and the implications of the integrated findings for advancing the ESP program. The qualitative themes identified through educator interviews and student focus groups align with the quantitative survey results. Educators praised multiliteracies, and quantitative data revealed that 85% of students demonstrated heightened involvement (Table 8). The qualitative feedback on the incorporation of multiliteracies corresponds with

the quantitative results, revealing that merely 40% of educators perceived themselves as proficient in employing these strategies.

The triangulation of data sources enhances the validity of findings by verifying evidence from many perspectives. The qualitative insights from

Table 8. Summary of qualitative themes and corresponding quantitative data

Theme	Qualitative Insights	Quantitative Data
Educators' Perceptions	Positive views on multiliteracies enhancing engagement	85% of students felt more engaged
Challenges in Integration	Lack of resources and training	40% felt adequately trained
Impact on Learning Outcomes	Improved language skills attributed to multiliteracies	75% reported improved overall proficiency
Theme	Qualitative Insights	Quantitative Data

educators and students contextualize the quantitative results, thus augmenting the overall dependability of the conclusions. The substantial positive correlation ($r = 0.68$, $p < 0.01$) between multiliteracy skills and ESP proficiency corroborates the qualitative theme of enhanced learning outcomes, as students reported increased confidence and competence in their language abilities, which they attributed to the use of multiliteracy practices. The findings of this study align closely with the existing literature, which emphasizes the importance of multiliteracies in contemporary educational settings. The New London Group (1996) introduced the concept of multiliteracies, promoting a broadened definition of literacy that encompasses several modes of communication beyond traditional reading and writing (Kahn & Kellner, 2005; Zapata et al., 2023). This study validates the concept by demonstrating how multiliteracies might enhance student engagement and language proficiency in ESP education.

Several studies have demonstrated the advantageous impact of multiliteracies on student learning outcomes. Studies by Zapata et al. (2023) suggests that the combination of several literacy types augments critical thinking and communication skills in learners (Liang & Fung, 2021; Tuxtayevich et al., 2024; Yilmaz, 2021). This study corroborates previous findings, evidenced by the significant correlation ($r = 0.68$, $p < 0.01$) between multiliteracy skills and ESP

proficiency. This alignment with previous research substantiates the validity of multiliteracies as a practical pedagogical approach in language education.

Moreover, the challenges identified by educators regarding the integration of multiliteracies, such as insufficient resources and inadequate training, align with findings from previous studies. McLoughlin & Lee (2007) delineate the challenges educators have when integrating novel teaching methodologies into traditional educational settings (Blaschke, 2021; Hurley et al., 2024). This study enriches the current literature by providing distinctive insights into vocational education in South Sulawesi, thereby advancing the comprehension of the challenges educators face in diverse cultural and educational settings.

This study contributes to the discourse on multiliteracies and English for Specific Purposes education, aligning with other studies. A significant discovery is that multiliteracies necessitate student engagement. Diverse media enhanced students' drive and confidence in their linguistic abilities, a significant finding that is frequently neglected in the literature. Suggests that multiliteracies can foster a more interactive and participatory classroom by incorporating students into their learning process.

This research describes the cultural and contextual challenges faced by educators in South Sulawesi in implementing multiliteracies. A tailored

professional development program may surpass a generic counterpart. This result necessitates a more customized teacher training program that addresses particular educational difficulties and opportunities. The substantial rise in ESP proficiency scores following the use of multiliteracy initiatives demonstrates its effectiveness. This study contributes to the expanding corpus of research advocating for multiliteracies in vocational education. This is a crucial contribution to the continuing discourse on enhancing language education to align with workforce requirements. This study validates multiliteracies research and highlights the importance of student engagement, contextualized teacher training, and empirical evidence of improved ESP learning outcomes. These contributions are essential for informing language education research and practice, particularly in professional settings where effective communication skills are vital.

The ESP curriculum must encompass multiliteracies and address the varied communication requirements of vocational students (Lam, 2024). Curriculum planners should initiate instructional plans that utilize digital, visual, and tangible media. This technique involves students and illustrates the intricacies of corporate communication. Collaborative multimedia presentations in project-based learning can enhance students' understanding of topics and their communication skills. The curriculum must accommodate diverse learning styles. Educators can foster student ownership by allowing them to select their preferred method of demonstrating understanding, whether through written reports, presentations, or digital content creation. This tailored strategy aligns with the study's findings, which show that diverse literacy approaches have markedly enhanced student engagement. Evaluations must also assess linguistic proficiency and multiliteracy. Traditional evaluations may fail to measure students' multimodal communication competencies

effectively (Meccawy et al., 2021; Sokhanvar et al., 2021). Formative evaluations that focus on students' multiliteracies in real-world contexts may enhance their understanding of their abilities.

Strategies for Professional Development

Educators require specialized professional development programs to implement multiliteracies proficiently (Crook et al., 2025; Uribe-Banda et al., 2023; Uribe Zarain et al., 2025). Instructors must initially educate teachers on the implementation of multiliteracies in their curricula. Educators can enhance their classrooms through workshops and seminars focused on digital technologies and resources. Training in multimedia tools, such as video editing software and online collaboration platforms, can enhance teachers' confidence in their use during lectures and presentations.

A collaborative professional learning network among educators enhances the dissemination of best practices and resources. Regular meetings or online forums for educators to exchange their concerns, achievements, and obstacles related to multiliteracies may facilitate continuous learning (Gorghiu et al., 2024). This partnership may facilitate the development of comprehensive lesson plans and assessment instruments for the vocational program. Moreover, authorities must finance and endorse professional development initiatives that openly incorporate multiliteracies into education. Educational institutions can equip instructors for evolving employment demands by investing in continuous training and development (Sabato et al., 2023).

The ESP curriculum of multiliteracies holds considerable practical significance for educators and policymakers (Cheraghi & Motaharnejad, 2023; Dou et al., 2023). Stakeholders can enhance multiliteracies in vocational education by developing a curriculum that addresses students' varied communication requirements and offering targeted professional development. These

strategies will enhance student engagement and learning, equipping them for the contemporary workforce and improving their employment prospects.

■ CONCLUSION

This study examined the incorporation of multiliteracies into English for Specific Purposes (ESP) instruction in vocational high schools in South Sulawesi, with an emphasis on improving students' language competence and engagement through multimodal, digital, and culturally relevant methods. The study employed a convergent parallel design, integrating quantitative and qualitative methods to investigate the views, practices, and reactions of educators and learners concerning multiliteracy-based education.

The results indicate that multiliteracies substantially improve student engagement and foster the advancement of communicative ability in English for Specific Purposes settings. Quantitative findings revealed robust positive correlations between multiliteracy skills and ESP competence, with regression analysis indicating that multiliteracies accounted for over 50% of the variance in students' language ability. Qualitative insights offered depth and context, revealing that students showed increased confidence and motivation when teaching materials corresponded with their vocational fields and cultural backgrounds. Educators acknowledged the instructional advantages of multiliteracies but voiced apprehensions over insufficient training and heightened workload, concerns that were partially alleviated through peer collaboration and contextual adaptability.

The study emphasizes the necessity of incorporating local values, such as *siri' na pacce*, into multiliteracy initiatives to promote inclusive and culturally attuned educational settings. These findings substantiate the comprehensive assertion that multiliteracies are both theoretically sound and practically relevant in various educational settings, especially in vocational education.

Future research ought to utilize longitudinal methodologies to assess the enduring effects of multiliteracies across multiple semesters and investigate scalable frameworks that incorporate teacher development programs, digital infrastructure, and cross-sector collaboration in accordance with the Pentahelix model.

■ REFERENCES

- Åkerblad, L., Seppänen-Järvelä, R., & Haapakoski, K. (2021). Integrative strategies in mixed methods research. *Journal of Mixed Methods Research*, 15(2), 152–170. <https://doi.org/10.1177/1558689820957125>
- AlGerafi, M. A. M., Zhou, Y., Oubibi, M., & Wijaya, T. T. (2023). Unlocking the Potential: A comprehensive evaluation of augmented reality and virtual reality in education. *Electronics*, 12(18), 3953. <https://doi.org/10.3390/electronics12183953>
- Beltrán-Palanques, V. (2024). Assessing video game narratives: implications for assessing multimodal literacy in ESP. *Assessing Writing*, 60, 100809. <https://doi.org/10.1016/j.asw.2024.100809>
- Blaschke, L. M. (2021). The dynamic mix of heutagogy and technology: Preparing learners for lifelong learning. *British Journal of Educational Technology*, 52(4), 1629–1645. <https://doi.org/10.1111/bjet.13105>
- Carroll, M., Lindsey, S., Chaparro, M., & Winslow, B. (2021). An applied model of learner engagement and strategies for increasing learner engagement in the modern educational environment. *Interactive Learning Environments*, 29(5), 757–771. <https://doi.org/10.1080/10494820.2019.1636083>
- Cheraghi, Z., & Motaharnejad, A. (2023). Investigating the challenges of Iranian ESP teachers at medical schools: The role of

- video presentation on subject-related critical incidents. *Informatics in Medicine Unlocked*, 39, 101250. <https://doi.org/10.1016/j.imu.2023.101250>
- Cheung, S. K. S., Kwok, L. F., Phusavat, K., & Yang, H. H. (2021). Shaping the future of learning environments with smart elements: challenges and opportunities. *International Journal of Educational Technology in Higher Education*, 18(1), 16. <https://doi.org/10.1186/s41239-021-00254-1>
- Crook, K. M., Vega, H., Howell, E., Rowe, L. W., Bates, C. C., Mittapalli, K., & Banerjee, A. (2025). Responding to the needs of early literacy teachers: designing online professional development to improve writing instruction for multilingual learners. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-024-01841-3>
- Dou, A. Q., Chan, S. H., & Win, M. T. (2023). Changing visions in ESP development and teaching: past, present, and future vistas. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1140659>
- Ebrahimi, M. (2023). Multilingualism and plurilingualism in teaching the lingua franca: a critical review keywords lingua franca, multiculturalism, multilingualism plurilingualism multilingualism and plurilingualism in teaching the lingua franca: a critical review. <https://doi.org/10.22034/mic.2023.176626>
- García-Barroso, L., & Fonseca, M. C. (2023). Multiliteracidades para aprendientes de lenguas adultos: una revisión narrativa. *Porta Linguarum Revista Interuniversitaria de Didáctica de las Lenguas Extranjeras*, 40, 199–213. <https://doi.org/10.30827/portalin.vi40.26661>
- Gorghiu, G., Sherborne, T., Kowalski, R., Vives-Adrián, L., & Ribeiro, S. (2024). Enhancing teachers' self-efficacy supported by coaching in the content of open schooling for sustainability. *Sustainability*, 16(22), 10131. <https://doi.org/10.3390/su162210131>
- Gupta, P., Mahajan, R., Badhera, U., & Kushwaha, Pooja. S. (2024). Integrating generative AI in management education: A mixed-methods study using social construction of technology theory. *The International Journal of Management Education*, 22(3), 101017. <https://doi.org/10.1016/j.ijme.2024.101017>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Hurley, M., Butler, D., & McLoughlin, E. (2024). STEM teacher professional learning through immersive STEM learning placements in industry: a systematic literature review. *Journal for STEM Education Research*, 7(1), 122–152. <https://doi.org/10.1007/s41979-023-00089-7>
- Irhani, I., & Wahyudi, R. (2023). Promises and realities of foreign language medium instruction in the light of internationalization: A case study on EMI and AMI at an Indonesian Islamic University. *Research in Comparative and International Education*, 18(2), 277–291. <https://doi.org/10.1177/17454999231163447>
- Kahn, R., & Kellner, D. (2005). *Reconstructing Technoliteracy: a multiple literacies approach* (Vol. 2).
- Karkar-Esperat, T. M. (2025). Multiliteracies for multilingual learners: the MultiSemiotic Architecture Framework. *International Journal of Bilingual Education and Bilingualism*, 28(2), 117–134. <https://doi.org/10.1080/13670050.2024.2409120>
- Kustini, S. (2023). *A Project-Based Multiliterac*

- ies Instruction to Improve Students' Multimodal Literacy (pp. 632–647). https://doi.org/10.2991/978-2-38476-054-1_54
- Lam, K. Y. (2024). At the intersection of multiliteracies and glocalisation: a case study in a university in Taiwan. *Language, Culture and Curriculum*, 37(4), 472–496. <https://doi.org/10.1080/07908318.2024.2354874>
- Langegård, U., Kiani, K., Nielsen, S. J., & Svensson, P.-A. (2021). Nursing students' experiences of a pedagogical transition from campus learning to distance learning using digital tools. *BMC Nursing*, 20(1), 23. <https://doi.org/10.1186/s12912-021-00542-1>
- Lee, S.-Y., Lo, Y.-H. G., & Chin, T.-C. (2021). Practicing multiliteracies to enhance EFL learners' meaning-making process and language development: a multimodal Problem-based approach. *Computer Assisted Language Learning*, 34(1–2), 66–91. <https://doi.org/10.1080/09588221.2019.1614959>
- Liang, W., & Fung, D. (2021). Fostering critical thinking in English-as-a-second-language classrooms: Challenges and opportunities. *Thinking Skills and Creativity*, 39, 100769. <https://doi.org/10.1016/j.tsc.2020.100769>
- Maouche, S. (2021). ESP for economy and business: A critical needs analysis of English language teaching in today's market economy in Algeria. *International Journal of Education and Learning*, 3(2), 65–75. <https://doi.org/10.31763/ijele.v3i1.100>
- Meccawy, Z., Meccawy, M., & Alsobhi, A. (2021). Assessment in 'survival mode': student and faculty perceptions of online assessment practices in HE during the Covid-19 pandemic. *International Journal for Educational Integrity*, 17(1), 16. <https://doi.org/10.1007/s40979-021-00083-9>
- Meydan, C. H., & Akka°, H. (2024). *The role of triangulation in qualitative research* (pp. 101–132). <https://doi.org/10.4018/979-8-3693-3306-8.ch006>
- Mrabti, L., & Alaoui, Z. B. (2024). *Balancing qualitative and quantitative research methods* (pp. 87–118). <https://doi.org/10.4018/979-8-3693-8689-7.ch004>
- Mutiaraningrum, I. (2024). *Navigating the Digital Culture Frontier: Digital Skills and 21st-Century Skills in Student-authored Digital Multimodal Composition* (pp. 487–496). https://doi.org/10.2991/978-2-38476-321-4_35
- Ogundiwin, O. A., Adewumi, G. S., Olabisi, O. L., & Asaju, O. A. (2024). The effect of active review strategy on students' attitude to basic science in oyo state. *Indonesian Values and Character Education Journal*, 7(1), 25–34. <https://doi.org/10.23887/ivcej.v7i1.78201>
- Ramírez-Montoya, M. S., Andrade-Vargas, L., Rivera-Rogel, D., & Portuguez-Castro, M. (2021). Trends for the future of education programs for professional development. *Sustainability*, 13(13), 7244. <https://doi.org/10.3390/su13137244>
- Rusticus, S. A., Pashootan, T., & Mah, A. (2023). What are the key elements of a positive learning environment? Perspectives from students and faculty. *Learning Environments Research*, 26(1), 161–175. <https://doi.org/10.1007/s10984-022-09410-4>
- Sabato, E., Doubleday, A. F., Lee, C., Correa, L. P., Huja, S., & Crain, G. (2023). Recommendations for remaining agile in the face of a dental faculty workforce shortage. *Journal of Dental Education*, 87(3), 295–302. <https://doi.org/10.1002/jdd.13118>

- Sancar, R., Atal, D., & Deryakulu, D. (2021). A new framework for teachers' professional development. *Teaching and Teacher Education, 101*, 103305. <https://doi.org/10.1016/j.tate.2021.103305>
- Sokhanvar, Z., Salehi, K., & Sokhanvar, F. (2021). Advantages of authentic assessment for improving the learning experience and employability skills of higher education students: A systematic literature review. *Studies in Educational Evaluation, 70*, 101030. <https://doi.org/10.1016/j.stueduc.2021.101030>
- Tafazoli, D. (2024). Exploring the potential of generative AI in democratizing English language education. *Computers and Education: Artificial Intelligence, 7*, 100275. <https://doi.org/10.1016/j.caeai.2024.100275>
- Tuxtayevich, K. I., Sojida Ahmatovna, P., Turgunbayevna, M. N., Rasulovna, R. M., Feruza, T., Qizi, R., Nargiza, Y., & Qizi, A. (2024). Different approaches to enhance critical thinking in digital education. *SPAST REPORTS, 1*(7). <https://www.spast.org/ojs/path>
- Uribe-Banda, C., Wood, E., Gottardo, A., Biddle, J., Ghaa, C., Iminza, R., Wade, A., & Korir, E. (2023). Assessing blended and online-only delivery formats for teacher professional development in Kenya. *Cogent Education, 10*(1). <https://doi.org/10.1080/2331186X.2023.2191414>
- Uribe Zarain, X., Hellman, A. B., & Bell, A. B. (2025). Transforming teacher attitudes and practices: The efficacy of sustained professional development in culturally responsive education. *TESOL Journal, 16*(1). <https://doi.org/10.1002/tesj.896>
- Valledor, A., Olmedo, A., Hellín, C. J., Tayebi, A., Otón-Tortosa, S., & Gómez, J. (2023). The eclectic approach in english language teaching applications: a qualitative synthesis of the literature. *Sustainability, 15*(15), 11978. <https://doi.org/10.3390/su151511978>
- Walker, A., & Qian, H. (2022). Developing a model of instructional leadership in China. *Compare: A Journal of Comparative and International Education, 52*(1), 147–167. <https://doi.org/10.1080/03057925.2020.1747396>
- Walsh, D., & Foster, J. (2024). Understanding the public stigma of mental illness: a mixed-methods, multi-level, exploratory triangulation study. *BMC Psychology, 12*(1), 403. <https://doi.org/10.1186/s40359-024-01887-3>
- Woulfin, S. L., & Jones, B. (2021). Special development: The nature, content, and structure of special education teachers' professional learning opportunities. *Teaching and Teacher Education, 100*, 103277. <https://doi.org/10.1016/j.tate.2021.103277>
- YILMAZ, A. (2021). The effect of technology integration in education on prospective teachers' critical and creative thinking, multidimensional 21st century skills, and academic achievements. *Participatory Educational Research, 8*(2), 163–199. <https://doi.org/10.17275/per.21.35.8.2>
- Zapata, G. C., Kalantzis, M., & Cope, B. (2023). *Multiliteracies in international educational contexts*. Routledge. <https://doi.org/10.4324/9781003349662>