

Faith, Language, and Technology: Developing a Multimodal ESP Textbook for Islamic Education

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ABSTRACT

English textbooks in Islamic higher education often lack contextual relevance and multimodal features essential for English for Specific Purposes (ESP) instruction. This study developed and evaluated a multimodal ESP textbook integrating Islamic values and digital literacy, in alignment with the institutional vision of UIN Sjeh M. Djamil Djambek Bukittinggi. An R&D design was employed. Practicality was assessed via a validated questionnaire (Cronbach's $\alpha = 0.87$); effectiveness was measured through pre- and post-test scores analyzed using an independent samples t-test. Seventy-six students were assigned to an experimental group ($n = 40$) using the self-developed textbook and a control group ($n = 36$) using conventional materials across six weeks (100 min each). Pre-test results confirmed baseline equivalence ($p > 0.05$). The textbook achieved a high practicality rating ($M = 4.25$; 85.09%). Post-test scores showed a significant group difference ($t = 7.496$, $p < 0.05$), with the experimental group outperforming the control group ($M = 77.93$ vs. 56.06). Effect size was large (Cohen's $d = 1.96$). The self-developed multimodal ESP textbook is both practical and effective for Islamic Education study program students. Findings support faith-integrated multimodal design as a worthwhile approach for ESP curriculum development in Islamic higher education. Future research should explore long-term retention and cross-institutional replication.

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INTRODUCTION

English instruction in Islamic higher education is expected to not only enhance students' linguistic competence but also integrate disciplinary relevance and moral values. Instructional materials should be systematically designed to support communicative competence, provide structured exposure to language skills, and incorporate Islamic perspectives into the learning process. [Hutchinson & Water \(1987\)](#); [Kausar \(2025\)](#); [Permatasari & Nurmaidah \(2024\)](#); [Rahmiani et al. \(2024\)](#); [Syafitri et al. \(2024\)](#); [Syafitri et al. \(2025\)](#) emphasize that English for Specific Purposes (ESP) materials must be tailored to learners' contextual needs in order to achieve meaningful engagement. The integration of language learning with professional and moral values requires instructional materials that are tailored to the specific needs of the students, which is especially important in ESP contexts like Islamic education ([Tomlinson, 2014](#); [Ahmed Alsamadani, 2017](#); [Astika, 2015](#); [Berwick, 2017](#); [Ekayati et al., 2020](#); [Farah et al., 2020](#); [Jaya & Subiyanto, 2017](#); [Kho & Pradana, 2019](#); [Rachmawati et al., 2021](#); [Rahman, 2015](#); [Rohmah, 2019](#); [Sally, 2019](#); [Saragih, 2014](#); [Sari et al., 2019](#); [Sriyanto & Sitorus, 2021](#); [Ulfah et al., 2021](#); [Wulandari et al., 2019](#)). Within this framework, an ideal textbook of English for Islamic education course should be practical, effective, and capable of connecting academic language learning with students' religious and professional orientations.

In reality, English textbooks commonly employed in Islamic education programs often remain generic and insufficiently adapted to students' needs in ESP contexts. These materials typically lack both contextual relevance and integration with technology, which may limit learners' motivation and outcomes ([Rahimi & Zhang, 2018](#)). In response, multimodal instructional design has been proposed as an innovative approach. Multimodal resources combine textual, visual, auditory, and digital features to create interactive learning environments that enhance comprehension and accessibility ([Armfield, 2011](#); [Roza et al., 2026](#)). Such approaches hold particular promise for Islamic Education study program students, as they allow for a richer and more engaging learning experience aligned with both linguistic and religious objectives. When designing materials for ESP courses, especially in fields like Islamic education, it's crucial that they reflect both academic language requirements and the students' professional goals ([Richard & Rodgers, 2014](#)).

Prior research has shown the benefits of contextualized ESP materials and the integration of technology in language learning ([Hyland, 2016](#); [Tomlinson, 2014](#)). However, existing studies predominantly focus on printed or single-mode resources, with limited exploration of multimodal materials specifically designed for ESP course, English for Islamic education. This indicates a research gap in the empirical evaluation of multimodal textbooks in terms of their practicality and effectiveness.

Despite the growing recognition of multimodality in language pedagogy, most empirical studies have been conducted in general EFL or ESP contexts rather than in Islamic higher education. For instance, research has shown that multimodal input can improve vocabulary acquisition, reading comprehension, and learner engagement ([Anari, Abusaeedi, &](#)

Shariati, 2019; Sokoli & Zabalbeascoa Terran, 2019). Yet, these studies rarely address learners whose academic orientation requires the integration of moral and religious content. Consequently, the specific pedagogical needs of Islamic higher education students remain underexplored.

Furthermore, studies that examine multimodal resources in higher education often prioritize technological affordances while overlooking the dimension of practicality for classroom implementation. Learners' perceptions of usability, clarity of learning objectives, and alignment with their cognitive load are critical factors in determining the success of multimodal textbooks (Moreno & Mayer, 2007). However, few investigations have systematically measured both practicality and effectiveness in a single framework. This omission creates a methodological gap in assessing whether multimodal textbooks are not only theoretically promising but also empirically valid for real-world classroom use.

Another dimension of the research gap lies in the context of ESP within Islamic education. While ESP scholars have widely emphasized domain-specific needs in fields such as business, engineering, or medicine (Evan & John, 1998), little attention has been paid to Islamic studies. Given that students in Islamic higher education require English to access scholarly works, participate in academic discourse, and engage in intercultural dialogue, instructional materials must bridge general language skills with their disciplinary content. Yet, systematic attempts to design and test multimodal ESP textbooks for this domain remain rare, highlighting the need for focused research.

To address this gap, the present study seeks to answer the following research question: Are multimodal English instructional materials for Islamic education course practical and effective in supporting students' learning?

METHOD

2.1 Research Design

This study employed a Research and Development (R&D) approach using the ADDIE model to develop and evaluate a multimodal ESP textbook for Islamic Education study program students. The present article specifically reports the evaluation phase of the ADDIE-based textbook development process, focusing on practicality and effectiveness testing through a quasi-experimental design.

Analysis. A needs analysis was conducted through observation, interviews, and document review, revealing that students required contextually relevant materials integrating technology and Islamic values. Curriculum analysis further identified a significant gap between the ideal curricular standards and the materials currently in use, which were predominantly generic, lacked multimodal features, and contained no integration of Islamic values or digital literacy. This gap justified the development of the new textbook.

Design phase. The textbook was designed using two theoretical frameworks: ICT in English Language Teaching (ELT) (Moreno & Mayer, 2007; Tomlinson, 2014) and Islamic value integration (M & Yahya, 2023; Wijayanto, 2020). The ICT in ELT framework guided the incorporation of digital and audiovisual elements, while the Islamic value framework

informed the selection of themes, texts, and vocabulary grounded in Islamic teachings.

Development phase. The developed textbook integrates English language learning with Islamic values through multimodal activities targeting the four language skills: listening, speaking, reading, and writing, supported by vocabulary and grammar exercises in religious contexts. Activities include listening to audiovisual materials about the Five Pillars of Islam, learning Islamic vocabulary, reading texts on Shahada, Salat, Zakat, Sawm, and Hajj, delivering short speeches on Islamic themes, and constructing sentences using the simple present tense to describe Islamic practices. These tasks aim to promote both linguistic competence and religious literacy in English.

Implementation phase. Prior to the main study, the textbook was trialed with a class outside the research sample to obtain feedback on usability and to serve as the basis for instrument reliability testing. A practicality questionnaire was subsequently administered to the tryout class, confirming that the textbook was practical for classroom use.

Evaluation phase. The evaluation phase assessed practicality based on tryout class responses and effectiveness through a quasi-experimental design, comparing learning outcomes between an experimental group using the developed textbook and a control group using conventional materials over six weeks (100 minutes per session).

2.2 Population and Sample

The population consisted of 415 Islamic Education (PAI) students at UIN Sjech M. Djamil Djambek Bukittinggi. To select comparable classes, English proficiency pre-tests were administered to all PAI classes. Two classes with homogeneous mean scores were identified: Class 2A (n = 40) as the experimental group and Class 2B (n = 36) as the control group (total sample: 76 students). The classes were selected through purposive intact-group sampling based on pre-test homogeneity. Homogeneity was confirmed through Levene's test (Sig. = 0.225 > 0.05), and pre-test scores established baseline equivalence (experimental: M = 54.20; control: M = 53.87; $p > 0.05$).

2.3 Instrumentation and Data Collection

Data were collected using two validated instruments. First, English proficiency tests covering listening, vocabulary, reading, speaking, and writing were used to measure effectiveness. Content validity was established by three English language lecturers and analyzed using the Content Validity Index (CVI) with Aiken's formula, yielding a CVI of 0.97 (highly valid). Reliability was confirmed through a trial with the same tryout class, yielding a Cronbach's alpha of 0.614 (reliable). Second, a practicality questionnaire of 22 indicators across four aspects (learning, content, performance, and benefits) was administered to the tryout class. Its content validity was reviewed by three expert validators, and internal consistency yielded a Cronbach's alpha of 0.87 (high reliability). Items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

2.4 Data Analysis

Practicality. Descriptive statistics were used to calculate mean scores and percentages, interpreted using the criteria proposed by [Idayani & Purwanto \(2017\)](#), which classify scores above 4.2 as highly practical and between 3.4 and 4.2 as practical.

Effectiveness. An independent samples t-test was used to compare group outcomes ([Creswell, 2011](#)). Prior assumptions were verified: normality was confirmed using the Kolmogorov–Smirnov and Shapiro–Wilk tests (Sig. > 0.05), and homogeneity was confirmed using Levene's statistic (Sig. = 0.225 > 0.05). The hypotheses tested were: H0 (no significant difference between groups) and H1 (the experimental group significantly outperforms the control group). H0 was rejected if the significance value was less than 0.05.

RESULTS

3.1 Practicality Test Results

The practicality of the multimodal English instructional material was evaluated using students' responses to a questionnaire consisting of 22 indicators. Descriptive statistics were used to evaluate the data and determine the percentages and mean scores. The overall average score was 4.25 (85.09%), which falls into the category of highly practical according to the interpretation matrix proposed by [Idayani & Purwanto \(2017\)](#). Out of the 22 indicators, 11 were rated as highly practical, while the remaining 11 (eleven) were classified as practical. Key strengths identified included systematic presentation of materials (M = 4.47; 89.33%), readability of the text (M = 4.50; 90.00%), and presentation of images (M = 4.63; 92.67%).

Table 1. Result of Practicality Test

Aspects	Indicators	Average	Percentage	Criteria
Learning	1. Clarity of success indicators	4.20	84.00	Highly practical
	2. Clarity of learning instructions	4.17	83.33	Practical
	3. Systematic presentation of materials	4.47	89.33	Highly practical
	4. Conveyance of moral values	4.00	80.00	Practical
	5. Provision of opportunities for self-directed learning	3.90	78.00	Practical
	6. Provision of exercises for question comprehension	4.20	84.00	Highly practical
Content	7. Clarity of learning objective achievements	4.17	83.33	Practical
	8. Ease of understanding sentences in text/writing	4.10	82.00	Practical
	9. Ease of understanding lesson materials	3.87	77.33	Practical

	10. Precision in the presentation order of materials	4.40	88.00	Highly practical
	11. Relevance of learning to the application program	4.17	83.33	Practical
Performance	12. Clarity of instructions for using the application program	3.97	79.33	Practical
	13. Readability of text/writing	4.50	90.00	Highly practical
	14. Quality of image display	4.43	88.67	Highly practical
	15. Presentation of images	4.63	92.67	Highly practical
	16. Color composition	4.70	94.00	Highly practical
Benefits	17. Level of student interaction with the media	4.23	84.67	Highly practical
	18. Ease of selecting presentation menus	3.97	79.33	Practical
	19. Freedom in usage	4.13	82.67	Practical
	20. Ease of navigation	4.10	82.00	Practical
	21. Image efficiency	4.60	92.00	Highly practical
	22. Text efficiency	4.70	94.00	Highly practical
Average		4.25	85.09	Highly practical

These results suggest that students perceived the textbook as user-friendly, engaging, and supportive of their independent learning. Although some minor technical issues were noted, such as difficulties in accessing QR codes, the overall perception was positive. This finding is consistent with prior studies that highlight the role of clarity, structure, and multimodal features in enhancing learning materials' practicality (Moreno & Mayer, 2007; Tomlinson, 2014). The high practicality rating indicates that the multimodal textbook not only meets students' expectations for usability in classroom settings.

3.2 Effectiveness Test Results

Pre-test scores confirmed the initial equivalence of both groups (experimental: $M = 54.20$; control: $M = 53.87$), indicating no significant baseline difference. Following six weeks of treatment, post-test results showed that the experimental group ($M = 77.93$) substantially outperformed the control group ($M = 56.06$). The effect size was large (Cohen's $d = 1.96$), confirming that the multimodal textbook produced a practically significant improvement in English proficiency beyond what conventional materials achieved.

The textbook's effectiveness was assessed through tests on listening, vocabulary, reading, speaking, and writing skills. Results from the

experimental and control groups were presented in the following table, with posttest scores in the following histograms.

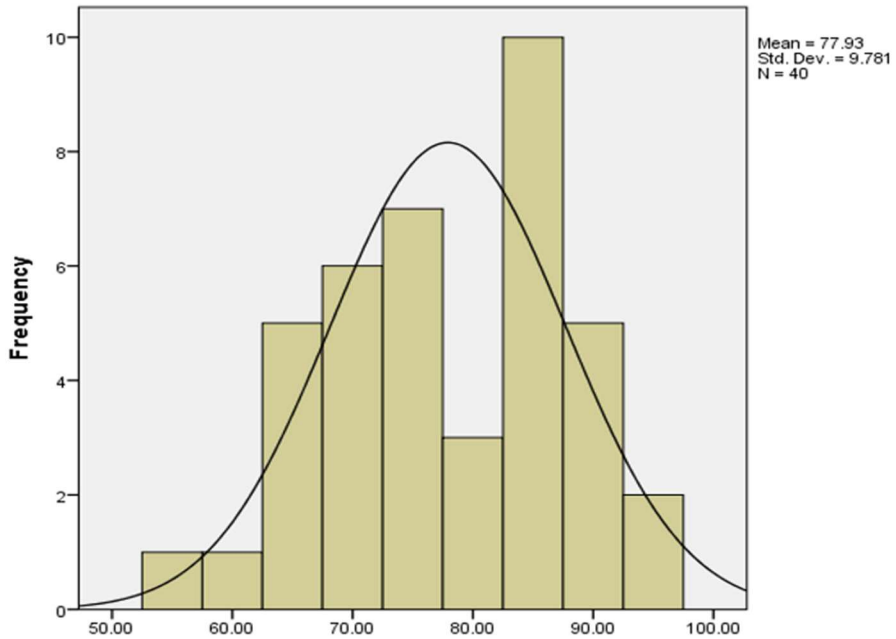


Figure 1. Post Test – Experimental Class

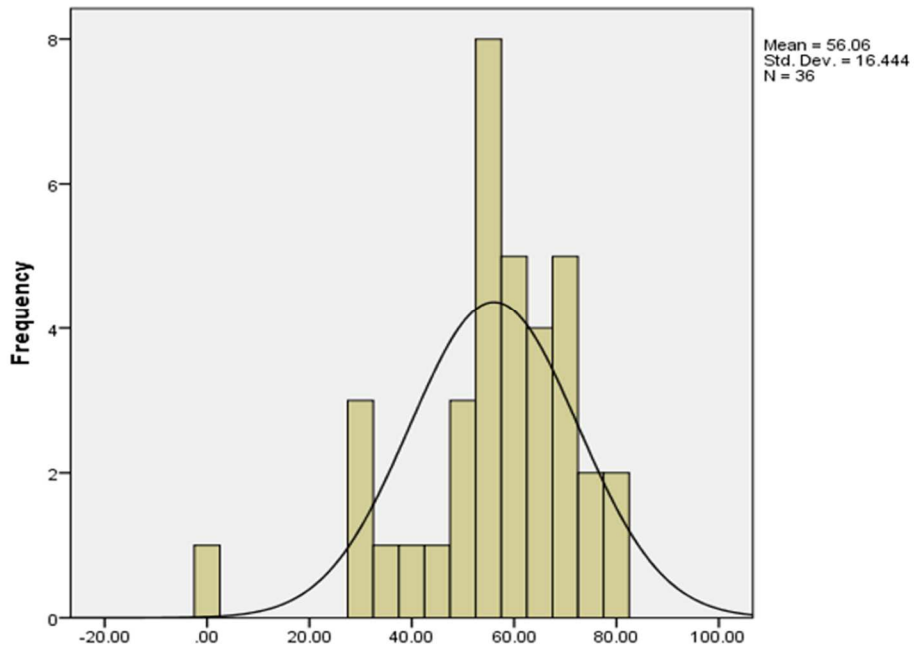


Figure 2. Post test – Control Class

Normality and homogeneity assumptions were checked prior to the independent samples t-test. The data were found to be normally distributed by the Shapiro-Wilk and Kolmogorov-Smirnov tests (Sig. > 0.05). The data's normality was evaluated using the Kolmogorov-Smirnov formula.

Table 2. Test of Data Normality

Class		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning outcomes	Experiment	0,123	40	0,129	0,960	40	0,173
	Control	0,136	36	0,098	0,946	36	0,083

The results of the normality test indicate that the significance value is greater than 0.05. Consequently, it can be said that the residual values follow a normal distribution. The homogeneity of both groups was further confirmed by homogeneity testing with Levene's statistic (Sig. = 0.225 > 0.05).

Table 3. Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Learning outcomes	Based on Mean	1,498	1	73	0,225
	Based on Median	1,479	1	73	0,228
	Based on Median and with adjusted df	1,479	1	58,697	0,229
	Based on trimmed mean	1,479	1	73	0,228

Based on the table above, the Sig value is 0.225 > 0.05, indicating that the data is homogeneous.

Testing Hypothesis using t-test.

The result of testing hypothesis for Islamic Education study program of UIN Sjech M. Djamil Djambek Bukittinggi students can be seen in the following table.

Table 4. Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Learning outcome	Equal variances assumed	7,496	73	0,000	20,268	2,704	14,879	25,657
	Equal variances not assumed	7,338	61,045	0,000	20,268	2,762	14,745	25,791

The independent samples t-test revealed a statistically significant group difference ($t = 7.496$, $df = 73$, $p = 0.000 < 0.05$; mean difference = 20.268, 95% CI [14.879, 25.657]). The large effect size (Cohen's $d = 1.96$) confirms that the self-developed multimodal textbook produced a practically meaningful improvement in students' English proficiency. Consequently, H_0 was rejected and H_1 was accepted: students taught with the multimodal textbook demonstrated significantly higher English proficiency than those using conventional materials.

DISCUSSION

The results of the practicality test show that the multimodal English instructional textbook for Islamic education was rated as highly practical. Students' evaluations highlighted strengths in systematic material presentation, readability, and visual quality, which indicate that the book was not only easy to use but also aligned with learner needs. This finding reinforces Tomlinson (2014)'s argument that instructional materials are most effective when they are perceived by learners as engaging, clear, and accessible. In addition, the high practicality ratings suggest that the integration of multimodal elements enhanced the attractiveness and usability of the material. Gilakjani (2017) strengthened that by blending digital tools with traditional teaching resources, teachers can create a more engaging and versatile learning environment for their students. However, unlike practicality studies in general EFL contexts where usability concerns center primarily on interface design and cognitive load (Moreno & Mayer, 2007), the present findings reveal that practicality in Islamic higher education is also shaped by religious identity and disciplinary alignment. The relatively lower scores on self-directed learning ($M = 3.90$) and navigation ($M = 4.10$) suggest that faith-based ESP learners may require additional scaffolding when engaging with technology-integrated materials, a contextual nuance that generic multimodal frameworks have yet to address.

The experimental group did better than the control group in terms of English proficiency results, according to the effectiveness test. With a mean difference of over 20 points, the results support the view that multimodal learning environments improve language acquisition by offering multiple channels of input and interaction. Moreno & Mayer (2007) in cognitive theory of multimedia learning explains this improvement by emphasizing that learners process information more effectively when presented with verbal and visual modes simultaneously, reducing cognitive overload and enhancing retention. The large effect size obtained (Cohen's $d = 1.96$) considerably exceeds those typically reported in comparable general EFL multimodal interventions, suggesting that content relevance, not multimodality alone, may serve as a key moderating variable in ESP learning outcomes. When language tasks are meaningfully embedded in students' religious and academic world, motivational and cognitive engagement are likely amplified beyond what context-neutral multimodal input can produce.

Another key discussion point is the role of multimodal resources in promoting learner engagement. Students in the experimental group

reported that the textbook's design, including images, interactive tasks, and digital elements, encouraged them to participate more actively in the learning process. This finding is consistent with [Sokoli & Zabalbeascoa Terran \(2019\)](#); [Syafitri \(2021\)](#); [Syafitri et al. \(2020\)](#); [Ghanizadeh et al. \(2015\)](#); [M & Yahya \(2023\)](#); [Moreno & Mayer \(2007\)](#); [Situmorang \(2024\)](#); [Hidayati et al. \(2025\)](#), who found that multimodal resources significantly increase learner motivation and participation in second language classrooms. The multimodal approach in teaching materials provides opportunities for students to engage with language through multiple sensory channels, thus enhancing comprehension and retention ([McGrath, 2008](#); [Daulay, Ramadhan, & Wahyuni, 2023](#); [Efriyanti & Annas, 2020](#); [Hamzah, 2024](#); [Monica & Izzah, 2023](#); [Salisah, Suryadi, & Pahamzah, 2023](#)). Engagement is particularly crucial in ESP contexts, where learners often face challenges connecting general English content to their specific fields of study. Distinctively, engagement in the present context appeared driven not only by professional relevance, as is typically reported in mainstream ESP research ([Hyland, 2016](#)), but also by moral tone, as Islamic values embedded in language tasks functioned as affective motivators connecting students' spiritual identity with academic learning. This suggests that in faith-based educational settings, identity-based dimensions of engagement must be deliberately designed for, rather than assumed to follow from disciplinary content alone.

The integration of multimodal design in this study also has implications for Islamic higher education. English instruction in this domain must balance linguistic development with religious and academic values. By embedding multimodal features, the textbook created opportunities for contextualized learning that reflected students' academic identity. This aligns with [Hyland \(2016\)](#), who emphasized the importance of tailoring ESP materials to disciplinary contexts. The success of a textbook is often determined by its ability to motivate learners, providing clear objectives and incorporating engaging, relevant content ([Scrivener, 2018](#)). Moreover the integration of multimedia resources into language teaching materials allows students to engage with content in ways that are more interactive, fostering a deeper understanding of the material ([Firmansyah, 2021](#); [Aloizou et al., 2025](#); [Rusli et al., 2019](#)). Unlike conventional textbooks, the multimodal approach offered students pathways to connect language learning with the epistemological framework of Islamic studies.

From a methodological perspective, this study contributes to bridging a gap in the evaluation of instructional materials by simultaneously addressing practicality and effectiveness. Previous studies often emphasized one dimension, either user perceptions of materials or learning outcomes, without combining both ([Rahimi & Zhang, 2018](#)). The present findings show that measuring practicality alongside effectiveness provides a more holistic understanding of the textbook's pedagogical value. This dual focus also underscores the importance of ensuring that innovative resources are not only theoretically beneficial but also usable in real classroom settings. Importantly, the coexistence of high practicality and high effectiveness in this study should not be assumed as inevitable: the lower scores on

navigation and self-directed learning indicators signal usability constraints that could limit learning gains in less supervised settings, underscoring the need to treat practicality as a dynamic variable that continues to interact with effectiveness across different implementation contexts.

Furthermore, the study highlights the need for ESP material development in less explored academic domains, particularly Islamic education. [Evan & John \(1998\)](#) stressed that ESP must be responsive to the unique linguistic and professional needs of learners. Effective ESP textbooks, particularly those used in Islamic education, must bridge the gap between language acquisition and the specific professional or academic needs of the students ([Richard & Rodgers, 2014](#)). In ESP contexts, such as English for Islamic education, the design of teaching materials must respect and incorporate cultural and disciplinary perspectives, ensuring both linguistic and professional relevance ([Benson & Reinders, 2011](#)). However, Islamic Education study program students have received comparatively little attention from ESP scholars, despite their growing need for English proficiency to access global research and participate in international discourse. By testing multimodal textbooks in this context, the study extends ESP research into an area with significant pedagogical importance but limited prior investigation.

Finally, the findings suggest practical implications for future curriculum design. Institutions of Islamic higher education can adopt multimodal approaches to enrich English instruction, ensuring that students not only acquire language skills but also engage with content relevant to their academic and moral development. As [Anari et al. \(2019\)](#) argues, multimodal learning fosters deeper comprehension and higher engagement, which are essential for long-term learning success. Therefore, the results of this study provide evidence-based support for adopting multimodal textbooks in similar contexts and call for further research into scaling and adapting such resources across diverse Islamic education institutions.

CONCLUSION

This study evaluated the practicality and effectiveness of a self-developed multimodal ESP textbook for the English for Islamic Education course at UIN Sjech M. Djamil Djambek Bukittinggi. Practicality assessment revealed that students rated the textbook as highly practical ($M = 4.25$; 85.09%), reflecting its systematic structure, text readability, and engaging multimodal features. These results affirm that the textbook is user-friendly and supports independent learning in Islamic higher education contexts.

Effectiveness testing further confirmed that the multimodal textbook significantly improved students' English proficiency compared to conventional materials. The experimental group's higher achievement validates the pedagogical value of integrating multimodal design in ESP instruction, particularly within Islamic higher education. Together, these findings indicate that multimodal textbooks provide not only theoretical advantages but also practical benefits in real learning environments.

Several limitations should be acknowledged. First, the study was conducted at a single institution, limiting generalizability. Second, long-term retention was not assessed; future studies should include delayed post-tests.

Third, the reliability estimates should be confirmed in larger-scale validation studies. Fourth, potential confounders, such as students' prior experience with digital learning tools, were not fully controlled. These limitations notwithstanding, this study concludes that the self-developed multimodal ESP textbook offers a promising direction for curriculum development in Islamic education, bridging linguistic competence with disciplinary relevance and technological integration. Future research should examine long-term impacts, test scalability across diverse institutional settings, and refine the textbook through iterative feedback cycles.

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AUTHORS CONTRIBUTIONS STATEMENT

WS designed the instrument, collected and analyzed the data, and drafted the manuscript. MP revised the instrument and approved the final manuscript. HP contributed to instrument development, data analysis, and manuscript revision. NS assisted in data collection. All authors approved the final version of the manuscript.

AI DISCLOSURE STATEMENT

During the preparation of this manuscript, ChatGPT (OpenAI) and QuillBot were used for translation and language refinement purposes only. All research content, analyses, and conclusions are entirely the authors' own responsibility.

COMPETING INTERESTS STATEMENT

The authors declare no competing interests.

REFERENCES

- Ahmed Alsamadani, H. (2017). Needs analysis in ESP context: Saudi engineering students as a case study. *Advances in Language and Literary Studies*, 8(6), 58–58. <https://doi.org/10.7575/aiac.all.v.8n.6p.58>
- Aloizou, V., Ioannou, A., Boloudakis, M., & Retalis, S. (2025). A learning experience design framework for multimodal learning in the early childhood. *Smart Learning Environments*, 12(1). <https://doi.org/10.1186/s40561-025-00376-3>
- Anari, N. N., Abusaeedi, A. A. R., & Shariati, M. (2019). The Effects of Multimodality on Reading Comprehension and Vocabulary Retention among Iranian EFL Learners. *Iranian Journal of English for Academic Purposes*, 8(4).
- Armfield, D. M. (2011). Multimodality: A Social Semiotic Approach to Contemporary Communication . By Gunther Kress . *Technical Communication Quarterly*, 20(3), 347–349.

<https://doi.org/10.1080/10572252.2011.551502>

- Astika, G. (2015). The role of needs analysis in English for specific purposes. *TEFLIN Journal - A Publication on the Teaching and Learning of English*, 10(1), 31. <https://doi.org/10.15639/teflinjournal.v10i1/31-47>
- Benson, P., & Reinders, H. (2011). Beyond the language classroom. *Beyond the Language Classroom*, (January 2011), 1–208. <https://doi.org/10.1057/9780230306790>
- Berwick, R. (2017). *A Needs assessment in language programming: from theory to practice*.
- Creswell, J. W. (2011). *Educational Research: Mixed Methods Designs*.
- Daulay, S. H., Ramadhan, A., & Wahyuni, S. (2023). Quizizz application in students learning outcomes: Teacher's and student's perception. *Modality: International Journal of Linguistics and Literature*, 3(2), 125–133. <https://doi.org/https://dx.doi.org/10.30983/mj.v3i2.6719>
- Efriyanti, L., & Annas, F. (2020). Aplikasi mobile learning sebagai sarana pembelajaran abad 21 pada era revolusi industri 4.0. *JURNAL EDUCATIVE: Journal of Educational Studies*, 5(1), 28–40.
- Ekayati, R., Manurung, I. D., & Yenni, E. (2020). Need analysis of Esp for non-English study program. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 4(2), 322–332. <https://doi.org/10.30743/ll.v4i2.3152>
- Evan, T. D., & John, M. J. S. (1998). *Developments in ESP: A multi-disciplinary approach*. Australia: Cambridge University Press.
- Farah, R. R., Akmal, A. N., & Hidayati, N. (2020). Exploring the English needs of mechanical engineering students in ESP class: Indonesian university context. *Englie: English Learning Innovation*, 1(1), 17–23. <https://doi.org/10.15548/jt.v28i1.627>
- Firmansyah, B. (2021). The Effectiveness Of Multimodal Approaches In Learning. *EDUTECH: Journal of Education And Technology*, 4(3), 469–479. <https://doi.org/10.29062/edu.v4i3.194>
- Ghanizadeh, A., Razavi, A., & Jahedizadeh, S. (2015). Technology-Enhanced Language Learning (TELL): A Review of Resources and Upshots. *International Letters of Chemistry, Physics and Astronomy*, 54, 73–87. <https://doi.org/10.56431/p-z6sj8g>
- Gilakjani, A. P. (2017). A Review of the Literature on the Integration of Technology into the Learning and Teaching of English Language Skills. *International Journal of English Linguistics*, 7(5), 95. <https://doi.org/10.5539/ijel.v7n5p95>
- Hamzah, A. (2024). Using VoA (Voice of America) to improve speaking abilities of autism students in learning English. *Modality: International Journal of Linguistics and Literature*, 4(1), 86–103. <https://doi.org/https://dx.doi.org/10.30983/mj.v4i1.8342>
- Hidayati, D., Widiati, U., Zen, E. L., & Ivone, F. M. (2025). Developing an LMS-based of ESP course for Islamic undergraduate students. *Social Sciences and Humanities Open*, 11(June). <https://doi.org/10.1016/j.ssaho.2025.101635>
- Hutchinson, T., & Water, A. (1987). English for specific purposes: A learning-centred approach. In *Cambridge University Press*. New York:

- Cambridge University Press. <https://doi.org/10.4324/9781315624747-23>
- Hyland, K. (2016). *English for Academic Purposes: An advance resource book*. Routledge.
- Idayani, S., & Purwanto, A. (2017). *Jurnal Pendidikan dan Konseling*. 105(2), 79. Retrieved from <https://core.ac.uk/download/pdf/322599509.pdf>
- Jaya, J., & Subiyanto, A. (2017). Needs analysis on the problems of Islamic economics students in learning Esp at state college of Islamic studies (STAIN) Pekalongan. *Parole: Journal of Linguistics and Education*, 7(2), 74–79. <https://doi.org/10.14710/parole.v7i2.79>
- Kausar, S. B. (2025). Integrating English for Specific Purposes (ESP) in Engineering Education : A Strategic Approach to Enhancing English Proficiency and Professional Communication Skills. *International Journal of Engineering and Advanced Technology Studies*, 13(3), 32–41.
- Kho, S., & Pradana, S. A. (2019). A need analysis English for business course. *English Education: Jurnal Tadris Bahasa Inggris*, 12(2), 139–146.
- M, A. R., & Yahya, A. (2023). Development of Multimedia-Based and Islamic English Textbooks at IAIN Palopo Language Laboratory. *Indonesian Tesol Journal*, 5(2), 339–349.
- McGrath, I. (2008). *Materials_Evaluation_and_Design_for_Language_Teaching.pdf*. Edinburgh University Press Ltd.
- Monica, E., & Izzah, L. (2023). The effectiveness of LEDP application on students' listening comprehension. *Modality: International Journal of Linguistics and Literature*, 3(2), 118–124.
- Moreno, R., & Mayer, R. (2007). Interactive multimodal learning environments: Special issue on interactive learning environments: Contemporary issues and trends. *Educational Psychology Review*, 19(3), 309–326. <https://doi.org/10.1007/s10648-007-9047-2>
- Permatasari, D., & Nurmaidah, A. Y. (2024). The Importance of Applying Esp (English for Specific Purposes) Through Islamic Culture To College Students. *Proceeding of International Conference on Education and Sharia*, 1(1), 79–88. <https://doi.org/10.62097/ices.v1i24.33>
- Rachmawati, D. L., Hastari, S., & Dwiharto, J. (2021). Need analysis to create a better instruction and material for ESP management students. *IJECA International Journal of Education & Curriculum Application*, 4(3), 283–297.
- Rahimi, M., & Zhang, L. J. (2018). Effects of Task Complexity and Planning Conditions on L2 Argumentative Writing Production. *Discourse Processes*, 55(8), 726–742. <https://doi.org/10.1080/0163853X.2017.1336042>
- Rahman, M. (2015). English for specific purposes (Esp): A holistic review. *Universal Journal of Educational Research*, 3(1), 24–31. <https://doi.org/10.13189/ujer.2015.030104>
- Rahmiani, N., Munir, F. S., Anastasia, I., Ratnah, R., Ajiza, M., & ... (2024). *Buku Ajar English For Specific Purposes (ESP)*. Retrieved from <https://books.google.com/books?hl=en&lr=&id=8g0nEQAAQBAJ&oi=fnd&pg=PA58&dq=buku+panduan+50+kegiatan+deep+learning+untuk>

- [+aud&ots=uqoC_yOrmf&sig=rwdTyA3lbnAYcUp-T2VksFMfOg4](#)
- Richard, J. C., & Rodgers, T. S. (2014). Approaches and Methods in Language Teaching, Third Edition. In *Cambridge University Press* (Vol. 3). <https://doi.org/10.5325/korelangamer.20.2.0166>
- Rohmah, N. (2019). Esp needs analysis : Case study engineering programs state polytechnic of Madura. *INELTAL Conference Proceedings*, 170–176.
- Roza, V., Melani, M., Ahida, R., Arsyad, S., Sakti, G., & Mellian, Y. A. (2026). AI vs . Human Feedback in EFL Writing : Examining the Interplay Between Feedback Modalities and Digital Proficiency. *TESL*, 30(1), 0–23. <https://doi.org/10.55593/ej.30117int2>
- Rusli, R., Hashim, H. U., Hashim*, H., & Yunus, M. M. (2019). Interactive Learning: An Innovation for English Language Acquisition. *International Journal of Innovative Technology and Exploring Engineering*, 2(9), 1187–1190. <https://doi.org/10.35940/ijitee.b7722.129219>
- Salisah, I. R., Suryadi, & Pahamzah, J. (2023). The effect of English children's songs on students' pronunciation enhancement. *Modality: International Journal of Linguistics and Literature*, 3(2), 149–156.
- Sally. (2019). A need analysis English for business course. *English Education: Jurnal Tadris Bahasa Inggris*, 12(2), 139–146. Retrieved from <http://ejournal.radenintan.ac.id/index.php/ENGEDU/article/view/5430>
- Saragih, E. (2014). Designing ESP materials for nursing students based on needs analysis. *International Journal of Linguistics*, 6(4), 59–70. <https://doi.org/10.5296/ijl.v6i4.5983>
- Sari, R. K., Kuncoro, A., & Erlangga, F. (2019). Need analysis of English for specific purposes (ESP) to informatic students. *Jeell*, 5(2), 26–37. <https://doi.org/10.32682/jeel.v4i2.986>
- Scrivener, J. (2018). *Learning Teaching*. Macmillan Pulishers Limited.
- Situmorang, K. H. (2024). Developing of English Instructional Design for English for Specific Purpose in the Islamic Religious Education Study Program. *Edulingua: Jurnal Linguistiks Terapan Dan ...*, 11(2). Retrieved from <https://ejournal.unisnu.ac.id/JE/article/view/6791%0Ahttps://ejournal.unisnu.ac.id/JE/article/viewFile/6791/2614>
- Sokoli, S., & Zabalbeascoa Terran, P. (2019). Audiovisual Activities and Multimodal Resources for Foreign Language Learning. *ResearchGate*, (March), 170–187. <https://doi.org/10.21832/9781788924498-015>
- Sriyanto, W., & Sitorus, N. (2021). Need analysis of English learning in the digital era for vocational higher education students. *Ethical Lingua*, 8(2), 419–425. <https://doi.org/10.30605/25409190.311>
- Syafitri, W. (2021). Can video motivate students in learning English during new normal era? *Proceeding of International Conference on Language Pedagogy (ICOLP)*, 1(1), 235–239. <https://doi.org/10.24036/icolp.v1i1.45>
- Syafitri, W., Artika, F. S., Rahman, M., & Triannisa, C. A. (2025). Bridging Classrooms and Careers: Exploring Students' Perspectives on English for Specific Purposes Instruction. *AL-ISHLAH: Jurnal Pendidikan*, 17(2),

- 1796–1805. <https://doi.org/10.35445/alishlah.v17i2.6889>
- Syafitri, W., Pami Putri, H., & Reflinda. (2020). Kahoot:Engage Students into English Economic Fun Learning. *Journal of Physics: Conference Series*, 1471(1). <https://doi.org/10.1088/1742-6596/1471/1/012006>
- Syafitri, W., Zaim, M., & Ardi, H. (2024). Designing TPACK-English Textbook for Economic Faculty Students. *World Journal of English Language*, 14(4), 1–15. <https://doi.org/10.5430/wjel.v14n4p1>
- Tomlinson, B. (2014). *Developing Materials for Language Teaching*. Bloomsbury Publishing Plc.
- Ulfah, B., Petrus, I., & Mirizon, S. (2021). ESP needs-based course design for the employees of government protocol department. *English Language in Focus (ELIF)*, 3(2), 143–158. Retrieved from <https://doi.org/10.24853/elif.3.2.143-158>
- Wijayanto, M. E. (2020). The integration of islamic values in implementation of learning english: islamic education students perspective. *ETERNAL (English, Teaching, Learning* Retrieved from <https://journal3.uin-alauddin.ac.id/index.php/Eternal/article/view/10617>
- Wulandari, R. Z., Muchsin, M. K., & Tambunan, T. (2019). A need analysis of English for specific purposes (esp) for nursing students at SMKS Kesehatan Kendari. *Journal of English Education and Teaching*, 3(4), 429–437. <https://doi.org/10.33369/jeet.3.4.429-437>