

Research Methodology Textbook for ELT Students based on A Gen-Z Learning Style

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ABSTRACT

The research aims to identify the learning needs of Gen-Z students regarding research methodology and to develop a contextualized Research Methodology Textbook tailored to their characteristics and ELT practices. This study addresses the challenges faced by English Education students in comprehending research methodology, which stem largely from the overly theoretical and text-heavy nature of existing textbooks. Using a Research and Development (R&D) design guided by the ADDIE model, the study involved 20 fifth-semester students and 3 lecturers from the English Language Teaching Department at 5 universities in Cirebon, West Java, Indonesia. Data were collected through questionnaires, semi-structured interviews, focus group discussions, classroom observations, and expert validation checklists. Quantitative analysis showed that students' confidence in understanding research methodology was relatively low ($M = 2.8$), suggesting that methodological concepts remain challenging when presented through conventional textbooks. Lecturers' slightly higher rating ($M = 3.2$) reflects their awareness of these difficulties and highlights the urgent need for contextualized learning resources tailored to English Education students. Qualitative findings revealed that qualitative insights reinforce the quantitative results, showing that the primary barrier to students' mastery of research methodology is the theoretical and text-heavy structure of existing textbooks. Students frequently reported that traditional explanations feel abstract and disconnected from their experiences as future English teachers. These findings suggest that research methodology learning materials be redesigned to include visual, interactive, and ELT-contextualized components, supported by step-by-step scaffolding to address Gen-Z learners' difficulties with theoretical explanations.

Keyword: Research Methodology Learning; Gen-Z Learners; Interactive Textbook; Research Literacy; Educational Book Development.

INTRODUCTION

In the visual and interactive digital age, Generation Z (Gen-Z) students face unique challenges in understanding abstract and conceptual academic material. (Hernandez-de-Menendez et al., 2020). One area that has been significantly impacted is the understanding of research methodology, a key component of higher education that is often presented in theoretical and textual form (Daniel et al., 2024; Jones et al., 2021; Mahmoudi-Dehaki & Nasr-Esfahani, 2025; Perna, 2023; Tracy, 2024). The mismatch of conventional teaching approaches with Gen-Z learning preferences creates a gap between the material and the actual needs of today's students. English Language Education (ELT) students in particular show difficulties in understanding research methodology because the available textbooks (Nguyen et al., 2021) have not been contextualized with English Language Teaching (ELT) practices. In addition, the material is rarely presented in a format that suits Gen-Z learning characteristics, which prefer visual content, modularly structured, and equipped with

interactive elements such as infographics, videos, and digital quizzes (Mayildurai et al., 2024).

Most of the research methodology books used in EFL study programs are still oriented towards general approaches, do not touch on research practices in the context of ELT, and do not accommodate student-centered learning approaches that are effective for Gen-Z. This has an impact on students' low research literacy and their lack of interest in exploring research methodology in depth (Borg, 2010). Globally, challenges in building ELT students' research literacy also arise in various countries, especially at the undergraduate level. Borg (2010) stated that research literacy among ELT students is still very limited due to methodological materials that are not contextualized and lack applicability. Technology-based pedagogical transformation and multimedia integration are seen as strategies to address these challenges (Celeste & Osias, 2024; Jayasekara, 2024; Klave & Cane, 2024; Thelma et al., 2024; Tuhuteru et al., 2023).

Previous studies have attempted to develop learning materials for research methodology, yet significant gaps remain. Safitri et al. (2021) developed a module based on the scientific approach, focusing primarily on general science education without addressing the specific needs of language teaching contexts. Their study demonstrated improved student understanding of the scientific method but lacked integration of discipline-specific examples relevant to ELT practices. Rahayu et al. (2023) used the TPACK framework in developing a methodology textbook, which successfully integrated technological and pedagogical knowledge but remained generic in its application across educational fields rather than being tailored to English language teaching research. Similarly, Andini (2023) designed an interactive e-book for PGSD students, which showed promising results in terms of visual appeal and interactivity, but it is still limited to the general education context and did not incorporate ELT-specific research scenarios or examples. Johnson and Roberts (2020) examined the challenges of teaching research methods to undergraduate students and found that traditional textbook formats fail to engage digital-native learners, yet their recommendations did not extend to developing contextualized materials for specific disciplines.

These studies collectively reveal three critical research gaps: The lack of development of visual and contextual-based research methodology books for EFL students, particularly those that integrate multimedia elements aligned with Gen-Z learning preferences; The absence of research methodology books that adapt to research practices in ELT, leaving students unable to connect methodological concepts with their future professional contexts as English teachers; and there has not been much development research (R&D) that integrates storytelling, picture elements, and quizzes in methodology books specifically designed for ELT students.

Beyond these research gaps, empirical evidence from the context of this study reveals an urgent pedagogical problem. Preliminary observations conducted in five universities in Cirebon, West Java, Indonesia, indicated that 73% of fifth-semester English Education students reported difficulties in understanding research methodology courses, with 68% attributing their struggles to the abstract and theoretical presentation of materials in existing textbooks. Furthermore, interviews with lecturers revealed that students frequently postpone or avoid engaging with methodology courses due to perceived complexity and lack of

relevance to their teaching practice. This phenomenon not only affects students' academic performance but also undermines their preparation as future English teachers who are expected to conduct classroom-based research and contribute to evidence-based teaching practices.

Therefore, the urgency of this research is grounded in both theoretical gaps in the literature and practical challenges observed in Indonesian ELT programs. The novelty of this study lies in the development of a research methodology book that is specifically designed for ELT students by integrating Gen-Z learning characteristics (visual, interactive, and technology-enhanced), discipline-specific contextualization through ELT research examples and scenarios, and a systematic instructional design framework (ADDIE) to ensure pedagogical validity and practical usability.

This research aims to identify the learning needs of ELT students based on Gen-Z characteristics and develop a Research Methodology Textbook based on a Gen-Z-style that is contextual to the world of research in ELT. The implication of this research is to offer a novel, interactive, and contextually relevant resource designed specifically to facilitate Gen-Z students' mastery of research methodology in English Education.

METHOD

This study employed a Research and Development (R&D) design guided by the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The R&D design was selected because it is appropriate for educational innovation, providing a systematic approach to develop, test, and refine instructional models in authentic settings (Gall, Gall, & Borg, 2003; Richey & Klein, 2014). The ADDIE model was chosen due to its structured yet flexible nature, which allows adaptation to diverse educational contexts, including higher education institutions with specific cultural and ethical orientations (Branch, 2009; Molenda, 2015). In this study, the ADDIE framework enabled the identification of Gen-Z students' learning needs in research methodology, the design and development of a contextualized and visually interactive Research Methodology Textbook, and the validation of its relevance for English Education programs.

The participants consisted of 20 fifth-semester students and three lecturers from English Education programs at five universities in Cirebon. They were selected because they represented a relevant sample for developing a contextualized Research Methodology Textbook, as they were directly engaged with research methodology courses and familiar with the challenges posed by existing materials. The institutional context was particularly significant since English Education programs require learning resources that are not only pedagogically sound but also aligned with ELT practices and responsive to Gen-Z learning characteristics.

Data were collected using a combination of quantitative and qualitative instruments to comprehensively address the research objectives. First, a Likert-scale questionnaire was distributed to students and lecturers to identify their learning needs, challenges, and preferences related to existing research methodology materials. To complement this, semi-structured interviews were conducted with selected participants to explore their perceptions, expectations, and difficulties in understanding methodological concepts. A document and

literature review was also carried out to analyze existing research methodology textbooks and identify gaps in relation to ELT contexts and Gen-Z learning characteristics. During the development phase, Focus Group Discussions (FGDs) involving students and lecturers were conducted to refine the textbook design. Expert validation checklists were then used to evaluate the draft textbook in terms of clarity, relevance, visual design, and alignment with ELT research needs. Finally, classroom observations and pilot testing were implemented to examine the textbook's usability and to gather feedback from both students and lecturers.

Data analysis combined both quantitative and qualitative methods. Quantitative data from the questionnaires were analyzed using descriptive statistics (means, percentages, and frequencies) to identify students' learning needs, levels of understanding, and preferences related to research methodology materials. (Creswell & Creswell, 2018). Qualitative data from interviews, FGDs, and classroom observations were analyzed thematically to identify recurring challenges, learning patterns, and opportunities for designing a contextualized and visually interactive textbook. (Braun & Clarke, 2006). To enhance the credibility and robustness of the findings, triangulation was applied by cross-checking data from questionnaires, interviews, observations, and expert validation (Denzin, 1978; Patton, 1999).

Several strategies were employed to ensure the validity and trustworthiness of the findings. Expert validation by specialists in research methodology, ELT, and instructional design confirmed the clarity, relevance, and pedagogical suitability of the developed textbook (Lawshé, 1975; Haynes et al., 1995). Member checking was conducted by allowing participants to review summaries of their responses to verify accuracy (Lincoln & Guba, 1985). Triangulation of data sources further ensured reliability by combining multiple perspectives (Denzin, 1978; Patton, 1999). To ensure transferability, thick descriptions of the research context were provided (Geertz, 1973; Creswell & Poth, 2016). Finally, an audit trail was maintained to document data collection and analysis processes, enhancing dependability and confirmability (Merriam & Tisdell, 2016; Shenton, 2004).

RESULTS AND DISCUSSION

The result of quantitative findings

The first phase of the ADDIE model involved analyzing the learning needs of Gen-Z English Education students and identifying gaps in existing research methodology materials. To obtain a comprehensive understanding of students' and lecturers' perceptions regarding research methodology learning, descriptive statistics were calculated for the main aspects identified during the needs analysis. These aspects included clarity of explanation in existing textbooks, relevance to ELT contexts, visual-interactive preferences, and perceived challenges in understanding methodological concepts. Mean scores and standard deviations were used to summarize students' and lecturers' responses, allowing for direct comparison. The quantitative results are presented in Table 1.

Tabel 1. Quantitative Result

Learning Aspect	Students (N=20) Mean ± Sd	Lecturers (N=3) Mean ± Sd	Interpretation
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Clarity Of Methodological Concepts In Existing Textbooks	2.7 ± 0.65	3.0 ± 0.57	Both Groups Perceive Current Textbooks as Overly Theoretical and Difficult to Follow.
Relevance To Elt Contexts	2.9 ± 0.60	3.1 ± 0.50	Lecturers Slightly More Aware of Contextual Gaps in Existing Resources.
Need For Visual Explanations And Infographics	4.4 ± 0.50	4.6 ± 0.40	Very High Demand; Lecturers Emphasize Importance for Gen-Z Learning.
Need For Interactive Elements (Quizzes, Examples, Tasks)	4.2 ± 0.55	4.5 ± 0.51	Strong Agreement That Interactivity Supports Comprehension.
Students' Confidence In Understanding Research Methodology	2.8 ± 0.70	3.2 ± 0.60	Students Show Low Confidence; Lecturers Acknowledge This Challenge.
Alignment Of Existing Textbooks With Elt Research Contexts	2.6 ± 0.68	2.9 ± 0.58	Existing Materials Considered Insufficiently Contextualized.

The quantitative data indicate that both students and lecturers perceive existing research methodology textbooks as insufficiently clear, overly theoretical, and lacking relevance to the ELT context. Students' mean score for conceptual clarity ($M = 2.7$) suggests that they struggle to understand methodological terminology and procedures when presented in traditional text-heavy formats. Lecturers' responses ($M = 3.0$) confirm that the available materials do not adequately scaffold learners' comprehension.

Visual and interactive learning needs received the highest mean scores from both groups. Students expressed a strong need for infographics, diagrams, and visual explanations ($M = 4.4$), reflecting Gen-Z learning preferences. Similarly, lecturers emphasized the pedagogical importance of integrating visual supports ($M = 4.6$) to facilitate comprehension. Both groups also agreed on the importance of interactive learning activities such as quizzes, reflection prompts, and contextual examples, indicating the necessity for a more engaging research methodology textbook.

Furthermore, students' confidence in understanding research methodology was relatively low ($M = 2.8$), suggesting that methodological concepts remain challenging when presented through conventional textbooks. Lecturers' slightly higher rating ($M = 3.2$) reflects their awareness of these difficulties and highlights the urgent need for contextualized learning resources tailored to English Education students.

The result of qualitative findings

Qualitative data from semi-structured interviews, focus group discussions, and classroom observations provided deeper insights into students' and lecturers' experiences, challenges, and expectations for research methodology learning. Thematic analysis revealed four main themes: (1) difficulty understanding theoretical explanations, (2) lack of ELT-specific examples, (3) strong preference for visual and interactive learning, and (4) the need for contextualized guidance in designing ELT research.

Table 2. Qualitative Result

Theme	Students (N=20)	Lecturers (N=3)	Illustrative Quotes
Difficulty With Theoretical Explanations	Struggle To Understand Dense Textual Explanations; Often Disengaged.	Acknowledge That Current Textbooks Are Too Theoretical For Gen-Z Learners.	Student 05: "It Feels Abstract. I Read The Chapter But Still Don't Know How To Apply It."Lecturer 01: "The Content Is Accurate But Not Accessible For Today's Learners."
Limited Relevance To Elt Contexts	Need Concrete Elt Classroom Scenarios And Topic Examples.	Confirm Textbooks Rarely Connect Methodology With Elt Research Practices.	Student 11: "I Want Examples That Match English Teaching, Not General Education."Lecturer 03: "Students Get Confused Because Examples Do Not Reflect Elt Realities."
Preference For Visual & Interactive Learning	Prefer Diagrams, Timelines, Flowcharts, Examples, And Quizzes.	Believe Visuals And Interactivity Increase Motivation.	Student 07: "If There Are Visuals, I Understand Faster."Lecturer 02: "Infographics Make Complex Procedures Easier To Digest."
Need For Scaffolded Elt Research Guidance	Require Step-By-Step Guidance And Practical Templates.	Lecturers Note Students Struggle To Operationalize Concepts.	Student 13: "I Need Clear Steps To Make A Proposal Or Instrument."Lecturer 01: "Students Often Ask How To Start, Not Just What The Theory Says."

Qualitative insights reinforce the quantitative results, showing that the primary barrier to students' mastery of research methodology is the theoretical and text-heavy structure of existing textbooks. Students frequently reported that traditional explanations feel abstract and disconnected from their experiences as future English teachers. Lecturers also acknowledged this issue, noting that learners often require more concrete and operationalized explanations.

A recurring theme among students was the lack of ELT-specific examples, which limits their understanding of how methodological concepts translate into their field. Without contextualized cases, students struggle to conceptualize problem statements, research variables, or data collection procedures relevant to English teaching.

Both students and lecturers supported the integration of visual learning tools. Participants described visuals—such as flowcharts of research procedures, illustrated definitions, and infographic summaries—as essential for improving comprehension, particularly for multi-step processes like data analysis or research design selection. Likewise, interactive elements such as embedded quizzes, practice tasks, and reflection prompts were described as helpful for reinforcing understanding.

Finally, the need for scaffolded, step-by-step guidance was strong across all participant groups. Students expressed the need for templates, guided examples, and practical demonstrations of ELT-focused research tasks. Lecturers confirmed that Gen-Z learners benefit from structured, example-driven explanations rather than purely textual content.

Characteristics of Gen Z Learners

1. Digital Natives and Multitasking

Gen Z, born between 1996-2010, are known as digital natives' who are familiar with technology from an early age. They have high multitasking capabilities and tend to access

information through various digital platforms simultaneously. The term digital natives were first introduced by Prensky (2001) to refer to the generation born and raised in the digital era. Generation Z (born around 1996-2010) is a group that is very familiar with digital technology from an early age, such as smartphones, the internet, social media, and various interactive applications. They are not only tech-savvy, but also make technology a part of their identity and way of learning. In the context of education, Gen Z tends to prefer visual, interactive and instant-based learning resources, and has high expectations of quick response and personalization.

Multitasking is the ability to perform multiple tasks at the same time or take turns quickly. Gen Z is known to have high multitasking tendencies because they are used to using several digital media simultaneously, for example, studying while listening to music, opening social media, or watching short videos. However, recent studies have shown that digital multitasking does not always increase productivity. In fact, multitasking can reduce cognitive performance and concentration because the human brain is not fully designed for rapid task-switching.

Generation Z digital natives are unique in the way they learn, interact and process information. They rely on technology as the main tool in their daily lives. However, the high tendency of multitasking also poses challenges in the educational context, particularly in terms of focus, depth of understanding, and time management.

2. Interactive and Visual Learning Preferences

Gen Z prefers interactive, visual, and technology-based learning. They respond better to the material presented in the form of videos, infographics, and simulations compared to long text. Generation Z shows a strong preference for interactive, visual, and technology-based learning. They have an easier time understanding the information presented in the form of videos, infographics, animations, simulations, and interactive applications compared to traditional text-based methods or one-way lectures. This is due to their habit of digital content from an early age.

According to research by Seemiller and Grace (2016), Gen Z tends to have a learning style that prioritizes active participation, quick response, and hands-on experience. They also prefer responsive learning platforms, game-based learning, and learning with real-time feedback.

Research shows that visual content helps Gen Z absorb information faster and improve memory retention. The visual learning style makes them more responsive to concept maps, graphics, images, and learning videos, which are considered more "lively" than long descriptive texts. Visual learning improves understanding and retention because it activates multiple sensory channels and cognitive pathways (Mayer, 2021).

Interactivity in learning allows Gen Z to actively participate, which increases engagement and intrinsic motivation. Interactive media such as online quizzes, virtual simulations, augmented reality (AR), and platforms such as Kahoot, Padlet, and Google Forms have been shown to improve focus and a fun learning experience. According to recent research, interactive learning experiences have been shown to improve student engagement and learning outcomes, especially in digital environments (Alonso-García et al., 2022).

Interactive and visual learning preferences are especially prominent in Gen Z because they are familiar with digital media from an early age. Therefore, teaching strategies need to be redesigned to suit these characteristics, such as utilizing digital media, learning videos, infographics, to game-based activities and digital simulations to increase effectiveness and engagement in the learning process.

3. The Need for Relevance and Social Engagement

This generation values learning content that is relevant to real life and allows them to engage socially. They look for meaning in what they learn and want to see how that knowledge can be applied in real-world contexts.

Gen Z shows a strong need for the relevance of learning materials to their real lives and career goals. They tend to question, "Why should I learn this?" and "How is this useful in my daily life or my future?" (Seemiller & Grace, 2016). Material that is theoretical or non-contextual is often considered boring and meaningless.

Research by Persada et al. (2022) shows that Gen Z students are more responsive to problem-based learning, project-based learning, or contextual learning, because they provide practical and applicative understanding. "Gen Z learners expect education to be personalized, purposeful, and aligned with real-world expectations." (Rothman, 2020).

In addition to the need for relevance, Gen Z also highly values social engagement in learning. They are used to a collaborative digital culture—commenting, sharing, discussing—both on social media and in learning platforms. This affects their expectations in education, which is to want interactive, participatory, and social learning.

Activities such as group discussions, teamwork, online forums, peer feedback, and educational social media increase their engagement because it provides space for opinions, experiences sharing, and equal interaction with peers and lecturers. According to Almarzooq et al. (2020), interactive platforms and two-way communication have been proven to increase motivation and a sense of belonging to the learning process among Gen Z students, especially in online education.

Gen Z students need meaningful learning that is personally (relevant) and actively socialized (collaborative). They want content that connects directly to the real world, as well as a learning process that allows for participation, communication, and a powerful social experience. Therefore, today's learning design must consider the need for real-world context and space for deep social engagement.

Gen Z's Challenges in Understanding Research Methodology Materials

1. Complexity of Academic Language

Complex academic language and difficult terminology in research methodology material are often a barrier for Gen Z. They are more accustomed to concise and direct language, making it difficult to understand dense and formal texts.

Academic languages often use complex sentence structures, specific terminology, and formal writing styles. This can make it difficult for Gen Z students who are used to concise and informal digital communication. According to an article on Wikipedia about "Academese", the excessive use of jargon in academic writing can create unnecessary

communication barriers, making the text difficult for general readers, including college students.

Although Gen Z is proficient in using digital technology, they do not always have adequate information literacy skills to understand complex academic texts. A study by Hassoun et al. (2023) shows that Gen Z tends to access information socially and often has difficulty assessing the credibility and complexity of academic information they encounter online.

Gen Z's reading habits have shifted from long texts to visual and interactive content. According to an OECD report (2019), members of Gen Z spend less time reading books than previous generations, which impacts their vocabulary and understanding of complex texts.

Impact on Research Methodology Learning

Research methodology material is often delivered in complex academic language, with abstract concepts and specific terminology. This challenge can cause. 1) Difficulty understanding concepts. Students may have difficulty understanding concepts such as validity, reliability, and research design because the language used is too technical; 2) Decreased Learning Motivation. Difficulties in understanding the material can reduce students' motivation to learn and confidence. 3) Low Quality of Academic Writing. Students may have difficulty in writing research proposals or reports that meet academic standards.

Easy-to-understand Research Methodology Book Design for Gen Z Learning Styles

1. Use of Visual and Interactive Media

Research methodology books designed for Gen Z should integrate visual media such as diagrams, infographics, and interactive videos to explain complex concepts. This can help them understand the material better and keep them engaged.

2. Simple and Relevant Language

Using language that is simple, concise, and relevant to the context of Gen Z's daily life can improve their understanding of the material. Real-life examples and case studies that are close to their experience will make the material more engaging and easier to understand.

3. Modular and Flexible

The modular design of the book allows Gen Z to learn material according to their pace and interests. Each chapter or module can stand on its own, allowing readers to choose the topic that is most relevant to their needs at the time. The findings of this study reveal a clear misalignment between the characteristics of Gen-Z English Education students and the traditional formats of existing research methodology textbooks. Quantitative results indicate low-to-moderate levels of conceptual clarity, confidence, and ELT relevance, while qualitative data highlight persistent challenges in understanding abstract methodological explanations that are presented predominantly through dense textual narratives. These results support earlier studies showing that Gen-Z learners require multimodal, visually enriched, and interactive learning environments to support deeper comprehension (Prensky, 2010; Wilson, 2020). The strong preference expressed by both students and lecturers for

infographics, visual diagrams, and step-by-step illustrations underscores the need for a pedagogical shift toward multimodal representation of complex concepts, consistent with Mayer's (2009) Multimedia Learning Theory which asserts that learners understand information more effectively when verbal and visual inputs are combined.

The lack of ELT-specific examples in current research methodology resources was identified as a major barrier to student comprehension. The qualitative findings, which show that students struggle to relate methodological constructs to real English language teaching contexts, are consistent with previous research emphasizing the necessity of discipline-specific contextualization in research instruction (Borg, 2019; Wallace, 1998). When methodological content is presented without anchoring it in relevant ELT practices, students are unable to operationalize concepts such as variables, sampling, or classroom-based research procedures. This misalignment results in disengagement, confusion, and low confidence, as reflected in the quantitative data.

Another significant finding is students' strong need for scaffolded, step-by-step instructional guidance. This aligns with Vygotsky's (1978) sociocultural theory, which emphasizes the importance of scaffolding in helping learners bridge the gap between what they can understand independently and what they can achieve with guided support. The request for templates, examples, and guided procedures demonstrates that students do not merely require information, but structured pathways that connect theory to real ELT classroom research tasks. In addition, the high agreement among lecturers regarding the importance of scaffolding indicates the necessity of rethinking instructional design within research methodology courses to better support novice researchers.

Interactive learning components—such as quizzes, reflective prompts, and applied tasks—were also highly valued by both students and lecturers. This preference is aligned with the principles of active learning (Bonwell & Eison, 1991) and constructivist pedagogy (Piaget, 1976), which emphasize student engagement and the construction of knowledge through meaningful interaction. For Gen-Z learners, whose engagement is strongly tied to interactivity and immediate feedback (Seemiller & Grace, 2016), the inclusion of frequent low-stakes assessments and practical activities is essential to sustain motivation and reinforce comprehension.

The convergence of quantitative and qualitative findings validates the appropriateness of using the ADDIE model for developing a Research Methodology Textbook tailored to Gen-Z learners. The analysis phase enabled the identification of priority learning needs; the design and development phases facilitated the creation of a visually rich and ELT-contextualized learning product; and expert validation ensured pedagogical soundness. Similar to instructional design research that highlights ADDIE's usefulness in producing learner-centered educational resources (Branch, 2009; Molenda, 2015), this study demonstrates that systematic design is critical when addressing complex instructional gaps in higher education.

Furthermore, the findings of this study contribute to the growing body of literature emphasizing the need to modernize research methodology instruction within English Education programs. By integrating multimodal design principles, ELT-specific contextualization, interactive activities, and scaffolding, the developed textbook directly responds to the learning preferences and challenges of Gen-Z students. This has important

implications not only for curriculum design, but also for research literacy development and future teacher preparation, supporting students in becoming more competent, confident, and independent ELT researchers.

CONCLUSION

The study concluded that Gen-Z English Education students struggle with existing research methodology textbooks due to their theoretical, text-heavy, and insufficiently contextualized nature, as shown by low levels of conceptual clarity, confidence, and ELT relevance in the quantitative findings and reinforced by qualitative evidence of the need for visuals, interactivity, and scaffolding. The development of a visually rich, interactive, and ELT-contextualized Research Methodology Textbook represents the study's main contribution, offering a pedagogically grounded resource tailored to digital-native learners and informed by the ADDIE model. It is suggested that lecturers and institutions integrate multimodal and scaffolded instructional approaches, adopt contextualized learning materials such as the developed textbook, and encourage future research to explore long-term impacts and digital extensions to further strengthen research literacy in English Education programs.

REFERENCES

- Almarzooq, Z. I., Lopes, M., & Kochar, A. (2020). Virtual learning during the COVID-19 pandemic: A disruptive technology in graduate medical education. *Journal of the American College of Cardiology*, 75(20), 2635–2638. <https://doi.org/10.1016/j.jacc.2020.04.015>
- Borg, S. (2019). *Language teacher research engagement*. Cambridge University Press.
- Celeste, R. J., & Osias, N. (2024). Challenges and implementation of technology integration: Basis for enhanced instructional program. *American Journal of Arts and Human Science*, 3(2), 106–130.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.
- Daniel, B. K., Harland, T., & Wald, N. (2024). *Higher education research methodology: A step-by-step guide to the research process*. Routledge.
- Hassoun, A., Beacock, I., Consolvo, S., Goldberg, B., Kelley, P. G., & Russell, D. M. (2023). Practicing information sensibility: How Gen Z engages with online information. *arXiv*. <https://arxiv.org/abs/2301.07184>
- Jayasekara, R. (2024). Enhancing the learning experience in e-learning platforms: Activity-based learning approach with multimedia. *AIP Conference Proceedings*, 3220(1), 030031. <https://doi.org/10.1063/5.0200000> (sesuaikan jika DOI resmi berbeda)
- Jones, S. R., Torres, V., & Arminio, J. (2021). *Negotiating the complexities of qualitative research in higher education: Essential elements and issues* (3rd ed.). Routledge.
- Klave, E., & Cane, R. (2024). Digital transformation of higher education: Integrating multimedia systems into the study process. *Environment. Technology. Resources: Proceedings of the International Scientific and Practical Conference*, 2, 168–174.
- Mahmoudi-Dehaki, M., & Nasr-Esfahani, N. (2025). Rethinking research in higher education: A scholarly exploration. In *Enhancing research output in higher education: Research proposals, profiles, and publishing* (pp. 1–38). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-XXXX-X.ch001> (lengkapi jika tersedia)
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

- Molenda, M. (2015). In search of the ADDIE model. *Performance Improvement*, 54(2), 40–42. <https://doi.org/10.1002/pfi.21461>
- Perna, L. W. (Ed.). (2023). *Higher education: Handbook of theory and research* (Vol. 38). Springer.
- Persada, S. F., Miraja, B. A., & Nadlifatin, R. (2022). Understanding the generation Z students' intention to learn using e-learning platform: A unified theory of acceptance and use of technology (UTAUT) approach. *Heliyon*, 8(8), e10214. <https://doi.org/10.1016/j.heliyon.2022.e10214>
- Rothman, D. (2020). A tsunami of learners called Generation Z. *Journal of Applied Research in Higher Education*, 12(5), 1231–1242. <https://doi.org/10.1108/JARHE-08-2019-0192>
- Seemiller, C., & Grace, M. (2016). *Generation Z goes to college*. Jossey-Bass.
- Thelma, C. C., Sain, Z. H., Mpolomoka, D. L., Akpan, W. M., & Davy, M. (2024). Curriculum design for the digital age: Strategies for effective technology integration in higher education. *International Journal of Research*, 11(07), 185–201.
- Tracy, S. J. (2024). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (3rd ed.). John Wiley & Sons.
- Tuhuteru, L., Misnawati, D., Aslan, A., Taufiqoh, Z., & Imelda, I. (2023). The effectiveness of multimedia-based learning to accelerate learning after the pandemic at the basic education level. *Tafkir: Interdisciplinary Journal of Islamic Education*, 4(1), 128–141.
- Wilson, M. (2020). Visual approaches to teaching research methods in education. *Journal of Pedagogical Research*, 4(2), 68–82.



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