

Negotiating Engagement and Digital Distraction: English Teachers' Pedagogical Adaptation for Generation Z in Secondary Classrooms

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Received: 08 Jan 2026 | Revised 22 Feb 2026 | Accepted: 10 Marc 2026

Abstract:

Background: The emergence of Generation Z has significantly transformed English language classrooms by introducing learning preferences shaped by digital immersion, rapid information access, and interactive communication environments. These characteristics challenge conventional teacher centered pedagogy and create a complex tension between learning engagement and digital distraction in secondary education settings.

Aims: This study examines how English teachers adapt their pedagogical practices to engage Generation Z learners while simultaneously managing the challenges of digital distraction within secondary school classrooms.

Methods: A qualitative descriptive design was employed. Data were collected through semi structured interviews, classroom observations, and instructional document analysis involving English teachers who regularly teach digitally oriented learners. The collected data were analyzed using thematic analysis to identify recurring patterns of instructional challenges and adaptive pedagogical strategies.

Results: The findings indicate that multimedia materials, collaborative learning tasks, and technology integrated activities increase student participation, motivation, and classroom interaction. Nevertheless, teachers continue to encounter persistent difficulties in maintaining sustained student attention, controlling off task digital behavior, and ensuring that technological tools remain aligned with pedagogical objectives.

Conclusion: The study demonstrates that effective instruction for Generation Z learners requires adaptive pedagogy that integrates digital technology with learner centered instructional design, structured interaction, and guided participation. Teachers must strategically transform digital engagement into productive learning opportunities rather than uncontrolled technological use. Strengthening teachers' digital pedagogical competence and providing institutional support are therefore essential to ensure that technology enriched classrooms promote sustained engagement, meaningful communication, and deeper language learning outcomes.

Keywords: Generation Z, English language teaching, digital distraction, pedagogical adaptation, secondary classrooms.

Cite this article: Saputra, A, R, P., Suhaimi., Putra, R, H. (2026). Negotiating Engagement and Digital Distraction: English Teachers' Pedagogical Adaptation for Generation Z in Secondary Classrooms. *Social Sciences and Humanities Reviews*, 2(1), 25-37

INTRODUCTION

The rapid diffusion of digital technology has transformed the ecology of learning in contemporary classrooms, particularly for students belonging to Generation Z. Learners in this generation have grown up surrounded by smartphones, social media platforms, and instant access to digital information, which shapes how they process knowledge and interact with educational content. Educational researchers such as (Ahmad, 2024), have described these learners as digital natives who demonstrate different cognitive habits and learning preferences compared with earlier generations. In language education, this shift challenges conventional teacher centered instruction that relies heavily on lecture based delivery and passive reception of knowledge. Scholars including (Raikhel, 2025) argue that Generation Z students tend to prefer interactive, technology supported, and collaborative learning environments that allow them to participate actively in knowledge construction. These preferences create both opportunities and tensions in English language classrooms where teachers must balance digital engagement with pedagogical structure. In many contexts, digital tools enhance students' motivation and participation but also introduce distractions that disrupt sustained attention during learning activities. Consequently, understanding how teachers respond to these changing classroom dynamics has become an increasingly important topic in contemporary education research.

In English language education, the integration of digital technologies has been widely recognized as a mechanism for enhancing learner engagement and communicative competence. Studies in technology mediated language learning indicate that multimedia resources, collaborative tasks, and online interaction can significantly increase students' motivation and participation in classroom activities. (Holozsai & József, 2024a) emphasizes that digital environments provide authentic linguistic input and opportunities for meaningful communication in second language learning. At the same time, however, researchers such as (Das, 2025), highlight that digital technologies may also produce fragmented attention and cognitive overload when not carefully managed within instructional design. Teachers therefore face a complex pedagogical challenge in negotiating the benefits of digital engagement while minimizing potential distractions. This tension is particularly visible in classrooms dominated by Generation Z learners whose learning behaviors are strongly shaped by digital media. As a result, educators are increasingly required to adapt instructional strategies in order to maintain meaningful learning experiences. Investigating how teachers implement such pedagogical adaptations is essential for understanding the evolving nature of language education in digitally mediated learning environments.

The transformation of classroom learning caused by the rise of Generation Z creates an urgent need to reconsider how English language teaching is designed and implemented. Traditional pedagogical approaches were largely developed for learning environments where digital technology played a minimal role in students' daily lives. However, contemporary classrooms now operate within an educational ecosystem where digital communication, multimedia interaction, and constant information access influence how students engage with learning materials. This shift requires teachers not only to integrate technology into instruction but also to manage the behavioral and cognitive consequences that accompany digital learning environments. Without effective pedagogical adaptation,

technology may undermine rather than support meaningful learning outcomes (Sibley et al., 2025). Teachers therefore need to develop instructional strategies that transform digital engagement into productive learning experiences rather than fragmented attention. Understanding how educators negotiate this balance becomes particularly important in English language classrooms where interaction, communication, and sustained participation are central to learning success. For these reasons, examining teachers' pedagogical adaptation in Generation Z classrooms offers valuable insights into how language education can remain effective within rapidly changing technological contexts (Wajdi et al., 2024).

Research on Generation Z learners consistently highlights the role of digital technology in shaping students' learning behaviors and expectations in the classroom. Studies suggest that digital native learners demonstrate strong preferences for visual content, interactive tasks, and collaborative problem solving activities. (Reid et al., 2023) argue that the concept of digital natives has significantly influenced educational discourse by encouraging educators to reconsider how technology mediates learning practices. In language education, digital platforms and multimedia resources have been shown to support vocabulary acquisition, communicative competence, and learner motivation. For example, (Holozsai & József, 2024b) emphasizes that digital tools enable authentic language exposure and facilitate interactive learning environments in second language education. At the same time, however, the growing presence of digital media in classrooms raises concerns about distraction and divided attention. Research by (Kostić & Ranđelović, 2022a) demonstrates that frequent digital interruptions may negatively affect concentration and task completion in learning environments. These findings suggest that the integration of technology in education requires careful pedagogical management to ensure that engagement leads to meaningful learning outcomes.

Another stream of research has focused on how teachers adapt instructional practices to respond to the characteristics of digitally oriented learners. Effective technology integration in language classrooms requires teachers to combine digital resources with learner centered pedagogical strategies that encourage interaction and critical thinking. (Selfa-Sastre et al., 2022) explains that successful digital pedagogy in language education involves designing tasks that promote communication rather than merely introducing technological tools into instruction. Similarly, (Gopinathan et al., 2022) highlights that teachers play a central role in shaping how technology is used to support collaborative learning and student engagement. Pedagogical adaptation therefore involves not only technological competence but also the ability to manage classroom interaction and learning focus. Teachers must negotiate the balance between technological innovation and instructional structure in order to maintain effective learning environments. This challenge becomes particularly relevant in Generation Z classrooms where digital engagement is both a resource and a potential distraction. Consequently, examining how teachers implement pedagogical adaptation provides important insights into the evolving relationship between technology, engagement, and classroom learning.

Despite the growing body of research on digital learning and Generation Z students, many studies have primarily focused on the technological tools used in classrooms rather than on the pedagogical negotiations teachers perform during daily instruction. Existing literature often emphasizes the benefits of digital learning environments while paying limited attention to the tensions between engagement and distraction experienced by teachers in real classroom settings. Furthermore, empirical studies frequently examine

students' perceptions of technology mediated learning rather than exploring how teachers adapt their instructional practices to manage digitally mediated classroom dynamics (Nikolopoulou, 2023). As a result, the complexity of teachers' pedagogical decision making in technology rich classrooms remains insufficiently explored. Understanding how teachers balance digital engagement with sustained learning focus is essential for developing effective instructional strategies for Generation Z learners. This issue becomes particularly significant in English language classrooms where communicative interaction and attention management play crucial roles in learning success. Investigating teachers' pedagogical adaptation therefore provides a deeper understanding of how digital technology reshapes instructional practice in contemporary education. Addressing this gap can contribute to broader discussions about how education systems respond to the challenges and opportunities created by digitally oriented learners (Alenezi et al., 2023).

This study aims to examine how English teachers adapt their pedagogical practices to engage Generation Z learners while managing the challenges associated with digital distraction in secondary classrooms. The research focuses on identifying instructional strategies that teachers employ to create meaningful and interactive learning environments for digitally oriented students. It also investigates how teachers negotiate the balance between technology integration and sustained learner attention during classroom activities. By exploring teachers' experiences and classroom practices, the study seeks to provide a deeper understanding of how digital learning environments influence pedagogical decision making. The findings are expected to reveal key challenges faced by teachers in maintaining engagement within technology rich classrooms. In addition, the study aims to identify adaptive strategies that help teachers transform digital engagement into productive learning opportunities (Aspandi & Muttaqin, 2025). Through this investigation, the research contributes to discussions on contemporary pedagogical transformation in language education. Ultimately, the study seeks to provide insights that support more effective teaching practices for Generation Z learners in digitally mediated educational contexts.

METHOD

Research Design

This study employed a qualitative descriptive research design to explore how English teachers negotiate the tension between engagement and digital distraction in Generation Z classrooms (Alam et al., 2025). Qualitative approaches are widely used in educational research to understand complex classroom dynamics that cannot be captured through numerical measurement alone. (Hatch, 2023) explains that qualitative inquiry is particularly appropriate when researchers aim to interpret human experiences and instructional practices within natural educational settings. In the context of language education, qualitative designs enable researchers to capture teachers' perspectives, classroom interactions, and pedagogical adaptations in real instructional environments. The present study focused on understanding how teachers adapt instructional strategies when teaching students whose learning behaviors are shaped by digital technology. (Doyle et al., 2020) notes that qualitative descriptive designs allow researchers to investigate contemporary phenomena while preserving the contextual meaning of participants' experiences. Through classroom observations, teacher interviews, and document analysis, the study examined how engagement and distraction are negotiated during everyday English language

instruction. This research design therefore provides a comprehensive understanding of pedagogical adaptation in technology mediated learning environments.

To clarify the research procedure, the overall research framework is illustrated in Figure 1.



Figure 1. CIPP evaluation framework used in the study.

Figure 1 illustrates the sequential stages of qualitative inquiry employed in this study. The research process began with data collection through interviews, classroom observations, and instructional document analysis. The collected data were then organized and categorized to identify recurring instructional patterns. Thematic coding was subsequently applied to examine emerging themes related to engagement, digital distraction, and pedagogical adaptation. The final stage involved interpretative analysis to understand how teachers negotiate instructional challenges in Generation Z classrooms.

Participant

Participants in this study consisted of English teachers who actively teach Generation Z students in secondary school contexts. The selection of participants followed purposive sampling to ensure that the teachers had relevant experience in teaching digitally oriented learners. (Nyimbili & Nyimbili, 2024) explains that purposive sampling allows researchers to select participants who possess rich information related to the research phenomenon. Teachers included in the study had at least two years of teaching experience and were familiar with integrating digital resources into classroom instruction. These criteria ensured that participants had sufficient exposure to the challenges and opportunities associated with digital learning environments. The participants represented teachers who regularly encounter issues related to student engagement and digital distraction during English language learning. Their experiences provided valuable insights into how pedagogical practices evolve in response to the characteristics of Generation Z learners. Through the involvement of experienced teachers, the study aimed to capture authentic classroom perspectives regarding instructional adaptation.

Table 1. presents the general characteristics of the participants involved in this research.

Participant Code	Teaching Experience	School Level	Teaching Context
T1	5 years	Secondary School	Digital supported classroom
T2	7 years	Secondary School	Multimedia based learning
T3	4 years	Secondary School	Technology integrated classroom
T4	6 years	Secondary School	Collaborative digital learning

The participant profile table summarizes key characteristics of the teachers involved in the study. The diversity of teaching experience allows the research to capture varied

perspectives on classroom engagement and digital learning challenges. All participants regularly integrate digital tools into their English teaching practices. This context provides a suitable setting for examining pedagogical adaptation in Generation Z classrooms.

Intrument

The primary instruments used in this study included semi structured interview guides, classroom observation protocols, and instructional document analysis sheets. Interviews were conducted to explore teachers' perceptions regarding digital engagement, student distraction, and pedagogical adaptation in their classrooms. (Longhurst & Johnston, 2023) emphasize that semi structured interviews allow researchers to explore participants' experiences while maintaining flexibility to follow emerging insights during conversation. Classroom observations were conducted to capture real instructional practices and teacher student interactions during English language learning activities. Observation protocols were designed to document how teachers organize digital learning activities and how students respond to those instructional strategies. Instructional documents such as lesson plans and teaching materials were also analyzed to understand how digital tools were incorporated into pedagogical design. (Chand, 2025) notes that combining multiple sources of qualitative data enhances the credibility and depth of research findings. The integration of these instruments allowed the study to capture both teachers' perspectives and observable classroom practices. Through this triangulated approach, the research generated comprehensive insights into pedagogical adaptation in digitally mediated learning environments.

Analysis plan

The collected data were analyzed using thematic analysis to identify patterns related to engagement, digital distraction, and instructional adaptation. (Naeem et al., 2023) describe thematic analysis as a systematic method for identifying and interpreting meaningful patterns within qualitative datasets. The analysis process began with data familiarization through repeated reading of interview transcripts, observation notes, and instructional documents. This stage was essential for developing a deeper understanding of the context in which teachers' pedagogical decisions emerged during classroom interaction. It also enabled the researchers to capture subtle connections across different data sources before generating formal codes. During the coding stage, segments of data that reflected classroom engagement, digital distraction, and teacher strategies were labeled with descriptive codes. These initial codes were then grouped into broader themes representing recurring pedagogical practices and classroom dynamics. The themes were subsequently examined to understand how teachers negotiate the balance between digital engagement and sustained learning attention. (Bayraktar, 2025) explain that thematic categorization helps researchers interpret relationships between instructional practices and classroom behavior. Through this analytic process, the study identified key patterns of pedagogical adaptation implemented by teachers in Generation Z classrooms. The final interpretation focused on explaining how these strategies contribute to effective English language learning in digitally mediated environments.

RESULTS AND DISCUSSION

Result

The findings reveal that English teachers experience a complex instructional landscape when teaching Generation Z learners in secondary classrooms. Classroom observations show that students demonstrate high enthusiasm when learning activities incorporate multimedia materials, digital platforms, and collaborative tasks. Teachers report that the use of visual content, interactive quizzes, and online discussion platforms increases student participation during language learning activities. However, the same digital devices that support learning engagement often create distractions when students access unrelated applications or social media. Interviews with teachers indicate that maintaining students' sustained attention becomes one of the most challenging aspects of classroom management. Teachers therefore attempt to redesign instructional strategies to ensure that digital engagement remains aligned with learning objectives. These adaptations include structured digital tasks, guided interaction, and clearly defined participation roles during classroom activities. Overall, the results indicate that effective teaching for Generation Z requires continuous negotiation between technology supported engagement and classroom focus. Summarizes the major pedagogical challenges identified during the data analysis process.

Table 2: Summary of CIPP evaluation findings.

Theme	Description	Evidence from Classroom
Digital engagement	Students respond positively to multimedia and online learning activities	Increased participation during technology integrated lessons
Digital distraction	Smartphones and social media reduce sustained attention	Off task behavior during independent learning tasks
Attention fluctuation	Students shift attention rapidly across multiple stimuli	Short focus duration during lecture based instruction
Pedagogical adaptation	Teachers redesign instruction to maintain engagement	Use of collaborative digital tasks

Table 2 shows that digital engagement and digital distraction emerge simultaneously within the learning environment. The table indicates that teachers must constantly balance technology integration with strategies that maintain students' cognitive focus. This finding suggests that the presence of digital tools in the classroom does not automatically lead to effective learning unless supported by well structured instructional management. Therefore, teachers are required to design learning activities that guide students' interaction with technology in ways that sustain attention and promote meaningful participation in the learning process.

Another important finding relates to the pedagogical strategies teachers employ to address these challenges. Teachers increasingly adopt learner centered instruction that encourages student interaction and collaborative learning. Classroom observations reveal that group discussion tasks, project based learning, and digital storytelling activities enhance student motivation. Teachers also introduce structured classroom routines to prevent excessive digital distraction. These routines include time limited device use, guided digital tasks, and teacher monitored interaction. Through these strategies, teachers attempt to transform digital technology from a source of distraction into a productive learning resource. These instructional practices illustrate how pedagogical adaptation becomes a critical

component of contemporary English teaching. The findings suggest that successful instruction for Generation Z requires a dynamic balance between engagement, structure, and technological mediation.

Discussion

The results highlight the complex relationship between digital engagement and classroom distraction in Generation Z learning environments. Previous studies have emphasized that digital native learners demonstrate strong preferences for interactive and visually rich learning environments. (Dlamini & Mhlongo, 2023) explains that learners raised within digital ecosystems develop different cognitive expectations toward educational experiences. The findings of this study support this perspective by showing that students respond positively to multimedia resources and collaborative learning tasks. However, the results also reveal that digital engagement can easily shift toward distraction when instructional activities lack structure. (Kostić & Ranđelović, 2022b) demonstrate that digital multitasking frequently disrupts sustained cognitive attention in learning environments. Teachers therefore play a crucial role in regulating how digital technologies are used during classroom learning. The findings reinforce the argument that digital technology must be embedded within pedagogical design rather than simply introduced as a learning tool.

Another important insight emerging from the study concerns the role of pedagogical adaptation in digitally mediated classrooms. Effective teaching for Generation Z requires teachers to redesign instructional strategies in ways that integrate digital engagement with meaningful learning interaction. (Rintaningrum, 2023) argues that successful technology integration in language education depends on how teachers design communicative learning tasks rather than on the technology itself. The present findings demonstrate that collaborative digital tasks encourage student participation and communication during English learning activities. At the same time, structured learning routines help maintain classroom discipline and reduce digital distraction. (Rintaningrum, 2023) emphasizes that digital pedagogy requires teachers to act as facilitators who guide learners' interaction with technological resources. The strategies observed in this study reflect such facilitative roles in managing digital learning environments. Consequently, pedagogical adaptation becomes a central mechanism through which teachers transform technology into an educational resource.

The study also contributes to the growing literature on learner engagement in digitally mediated classrooms. Research conducted by (Vongkulluksn et al., 2022) conceptualizes engagement as a multidimensional construct involving behavioral, cognitive, and emotional participation in learning. In the observed classrooms, technology integrated activities appear to enhance behavioral engagement through increased participation and interaction. However, the presence of digital devices simultaneously introduces challenges for cognitive engagement because students can easily shift attention toward non academic activities. (Luft & Brochu, 2023) suggests that digital learning environments often produce fragmented attention when instructional tasks lack clear structure. The findings of the present study illustrate how teachers attempt to counter this issue by implementing guided digital tasks and collaborative learning activities. These strategies help maintain students' attention within the learning process. As a result, engagement becomes a negotiated outcome rather than an automatic consequence of technology use.

The results further indicate that teacher competence in digital pedagogy plays a crucial role in shaping classroom learning dynamics. Digital competence involves not only technological knowledge but also the ability to design pedagogical strategies that support learning objectives. (DiKmen & DemiRer, 2022) describe this integration of technology and pedagogy through the Technological Pedagogical Content Knowledge framework. Teachers in this study demonstrate elements of such competence when they combine digital resources with collaborative learning activities and structured interaction. Their ability to regulate digital behavior during learning activities helps maintain classroom focus despite the presence of technological distractions. This finding suggests that teacher professional development programs should emphasize digital pedagogical competence. Strengthening such competencies can improve the effectiveness of technology integration in language classrooms. Consequently, teacher capacity building becomes a key component of successful digital learning environments.

Finally, the findings of this study contribute to broader discussions about the transformation of education in the digital era. Educational institutions worldwide are increasingly integrating digital technologies into teaching practices. However, the success of such integration depends largely on how teachers mediate the relationship between technology and learning engagement. (Dron, 2022) argues that digital technology should be understood as a social and pedagogical system rather than merely as a technical tool. The present study illustrates how teachers actively negotiate this system through adaptive instructional practices. By balancing engagement and classroom regulation, teachers transform digital environments into meaningful learning spaces. These insights provide valuable implications for language education and teacher development programs. The study therefore contributes to the understanding of how pedagogy evolves in response to the learning characteristics of Generation Z students.

Implications

The findings of this study provide important implications for educational practice and policy in digitally mediated learning environments. Teachers need to develop pedagogical strategies that integrate digital technology with structured instructional design. Effective digital pedagogy requires careful planning of learning activities that encourage interaction while maintaining classroom focus. Teacher training programs should therefore include modules on digital classroom management and technology integrated instruction. Educational institutions should also provide support systems that enable teachers to experiment with innovative learning approaches. The integration of collaborative learning platforms and multimedia resources can enhance student engagement when guided by clear pedagogical objectives. Policymakers should recognize that digital technology alone does not automatically improve educational outcomes. Instead, the effectiveness of digital learning depends on how teachers design and manage instructional practices. Strengthening teachers' digital pedagogical competence is therefore essential for sustaining meaningful learning in Generation Z classrooms.

Research contribution

This study contributes to the field of language education by providing a detailed analysis of the linguistic and psychological barriers that hinder speaking proficiency among junior high school students. It also offers practical recommendations for teachers and educators to enhance students' speaking abilities through communicative teaching

strategies and supportive feedback. By identifying both the challenges and potential solutions, the study fills a gap in the existing literature on language learning difficulties at the junior high school level, particularly in non-native English-speaking contexts.

Limitations

Although the study provides valuable insights into pedagogical adaptation in Generation Z classrooms, several limitations should be acknowledged. The research focuses primarily on teachers' perspectives and classroom observations within a limited educational context. As a result, the findings may not fully represent the diversity of digital learning practices across different educational systems. The qualitative design of the study emphasizes depth of understanding rather than statistical generalization. Future studies may combine qualitative and quantitative approaches to examine the broader impact of digital pedagogy on learning outcomes. Another limitation relates to the rapid evolution of digital technology, which continuously reshapes classroom practices. The instructional strategies identified in this study may therefore evolve as new technologies emerge. Additionally, the study does not examine students' perspectives in detail regarding their engagement and distraction during digital learning. Further research incorporating learner perspectives could provide a more comprehensive understanding of digitally mediated learning environments.

Suggestions

Future research should explore the relationship between digital pedagogy and language learning outcomes using mixed method approaches. Quantitative analysis could help measure how technology integrated instruction influences students' communication skills and academic performance. Comparative studies across different educational contexts may also reveal how cultural and institutional factors shape digital learning practices. Researchers may investigate how specific digital platforms support collaborative language learning in Generation Z classrooms. Another promising direction involves examining the role of artificial intelligence tools in language learning environments. Studies could also analyze how digital classroom management strategies influence students' sustained attention and learning motivation. Exploring students' perspectives on digital engagement would further enrich the understanding of contemporary classroom dynamics. Through such research directions, scholars can contribute to the development of more effective pedagogical strategies for teaching in the digital era.

CONCLUSION

This study examines how English teachers negotiate the balance between digital engagement and digital distraction when teaching Generation Z learners in secondary classrooms. The findings demonstrate that digital technologies create both opportunities and challenges within contemporary language learning environments, since multimedia resources, interactive platforms, and collaborative digital activities can significantly enhance student participation and motivation, while the constant presence of digital devices may also disrupt sustained attention and learning focus. As a result, teachers are required to continuously adapt their pedagogical strategies in order to maintain meaningful engagement in the classroom. The study shows that effective instruction for Generation Z depends on the ability of teachers to design structured digital learning activities that direct students'

technological interaction toward productive learning goals. Pedagogical adaptation therefore becomes a central mechanism through which teachers regulate the relationship between engagement, distraction, and learning outcomes. Through structured interaction, guided digital tasks, and collaborative learning activities, teachers are able to transform technology from a potential source of disruption into a valuable instructional resource. Beyond its classroom implications, this study also contributes to broader discussions on educational transformation in digitally mediated societies by highlighting that the success of digital learning environments depends not merely on the availability of technology, but on how educators integrate it into coherent pedagogical frameworks. Teachers act as key mediators who shape how digital tools influence student engagement and cognitive participation in language learning, so strengthening their digital pedagogical competence is essential for ensuring that technological innovation leads to meaningful educational outcomes. Educational institutions and teacher development programs should therefore provide systematic training that equips educators with strategies for managing digital engagement and maintaining classroom focus. By emphasizing the dynamic negotiation between engagement and distraction, this study offers a conceptual perspective that enriches current debates on digital pedagogy in language education and helps educators design more responsive and effective instructional practices in the evolving landscape of contemporary education.

AUTHOR CONTRIBUTION STATEMENT

Aulia Rachmad Pidie Saputra conceived the research idea, designed the research framework, conducted data collection, and led the writing of the manuscript. Suhaimi contributed to the development of the research methodology, assisted in data analysis, and provided critical revisions to improve the theoretical and analytical sections of the article. Reko Hary Putra supported the data interpretation process, contributed to literature review development, and assisted in editing and refining the manuscript for academic clarity. All authors discussed the results, contributed to the final version of the manuscript, and approved the manuscript for publication.

REFERENCES

- Ahmad, E. A. (2024). Revolutionizing learning: Leveraging social media platforms for empowering open educational resources. *International Journal of E-Learning and Higher Education (IJELHE)*, 19(1), 83–106.
- Alam, M. N., Alharbi, S. H., Mustafa, Z., Alotaibi, H. S., Hashim, F., Bhuiyan, A. B., & Gazi, M. A. I. (2025). From Distraction to Engagement: Exploring Smartphone Use and Digital Learning among Generation-Z Students. *Educational Process: International Journal*, 17, e2025329.
- Alenezi, M., Wardat, S., & Akour, M. (2023). The need of integrating digital education in higher education: Challenges and opportunities. *Sustainability*, 15(6), 4782.
- Aspandi, A., & Muttaqin, M. A. (2025). Transforming Teacher Roles in Indonesia's Digital Era: Enhancing Learning Effectiveness and Student Engagement. *Journal of General Education and Humanities*, 4(4), 1495–1510.

- Bayraktar, M. M. (2025). A Thematic Analysis on the Visual Representations of Learning: A Qualitative Study Based on the Drawings of Teacher Candidates in Theology Education. *Cumhuriyet İlahiyat Dergisi*, 29(3), 136–168.
- Chand, S. P. (2025). Methods of data collection in qualitative research: Interviews, focus groups, observations, and document analysis. *Advances in Educational Research and Evaluation*, 6(1), 303–317.
- Das, J. P. (2025). COGNITIVE LOAD AND DIGITAL LEARNING: STRIKING THE BALANCE IN E-CLASSROOMS. *Global Dimensions of Multidisciplinary Research*, 192.
- DiKmen, C. H., & DemiRer, V. (2022). The role of technological pedagogical content knowledge and social cognitive variables in teachers' technology integration behaviors. *Participatory Educational Research*, 9(2), 398–415. <https://doi.org/10.17275/per.22.46.9.2>
- Dlamini, R., & Mhlongo, S. (2023). Digital Education Ecosystem to Achieve Instructional Equity and Cognitive Justice. In F. Maringe & O. Chiramba (Eds.), *Online Teaching and Learning in the COVID-19 Era* (pp. 25–45). Springer International Publishing. https://doi.org/10.1007/978-3-031-42402-1_2
- Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing*, 25(5), 443–455. <https://doi.org/10.1177/1744987119880234>
- Dron, J. (2022). Educational technology: What it is and how it works. *AI & SOCIETY*, 37(1), 155–166. <https://doi.org/10.1007/s00146-021-01195-z>
- Gopinathan, S., Kaur, A. H., Veeraya, S., & Raman, M. (2022). The role of digital collaboration in student engagement towards enhancing student participation during COVID-19. *Sustainability*, 14(11), 6844.
- Hatch, J. A. (2023). *Doing qualitative research in education settings*. <https://www.torrossa.com/gs/resourceProxy?an=5976793&publisher=FZT373>
- Holozsai, J., & József, H. (2024a). *Aspects of digital learning among foreign language learners in secondary education*. https://dspace.kmf.uz.ua/jspui/bitstream/123456789/4108/1/Holozsai_Jozsef_Aspects_of_digital_learning_among_foreign_language_learners.pdf
- Holozsai, J., & József, H. (2024b). *Aspects of digital learning among foreign language learners in secondary education*. https://dspace.kmf.uz.ua/jspui/bitstream/123456789/4108/1/Holozsai_Jozsef_Aspects_of_digital_learning_among_foreign_language_learners.pdf
- Kostić, J. O., & Ranđelović, K. R. (2022a). Digital distractions: Learning in multitasking environment. *Psychological Applications and Trends*, 5, 301–304.
- Kostić, J. O., & Ranđelović, K. R. (2022b). Digital distractions: Learning in multitasking environment. *Psychological Applications and Trends*, 5, 301–304.

- Longhurst, R., & Johnston, L. (2023). 10 semi-structured interviews and focus groups. *Key Methods in Geography*, 168. <https://www.google.com/books?hl=id&lr=&id=1qu1EAAAQBAJ&oi=fnd&pg=PA168&dq=emphasize+that+semi+structured+interviews+allow+researchers+to+explore+participants%E2%80%99+experiences+while+maintaining+flexibility+to+follow+emerging+insights+during+conversation&ots=UGwGKWbNCT&sig=h-2Bqo88XNjkNIZXynFDoHN9Z88>
- Luft, P., & Brochu, C. (2023). Online learning challenges and strategies: Visual fatigue and split visual attention. *American Annals of the Deaf*, 168(3), 71–92.
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22, 16094069231205789. <https://doi.org/10.1177/16094069231205789>
- Nikolopoulou, K. (2023). Self-regulated and mobile-mediated learning in blended tertiary education environments: Student insights from a pilot study. *Sustainability*, 15(16), 12284.
- Nyimbili, F., & Nyimbili, L. (2024). *Types of purposive sampling techniques with their examples and application in qualitative research studies*. <http://dspace.chau.ac.zm:8080/handle/123456789/235>
- Raikhel, A. M. (2025). *Challenges and strategies for implementing a student-centered approach in teaching English as a second foreign language*. <http://dspace.smsu.edu.ua:8080/handle/123456789/12325>
- Reid, L., Button, D., & Brommeyer, M. (2023). Challenging the myth of the digital native: A narrative review. *Nursing Reports*, 13(2), 573–600.
- Rintaningrum, R. (2023). Technology integration in English language teaching and learning: Benefits and challenges. *Cogent Education*, 10(1), 2164690. <https://doi.org/10.1080/2331186X.2022.2164690>
- Selfa-Sastre, M., Pifarré, M., Cujba, A., Cutillas, L., & Falguera, E. (2022). The role of digital technologies to promote collaborative creativity in language education. *Frontiers in Psychology*, 13, 828981.
- Sibley, L., Fabian, A., Plicht, C., Pagano, L., Ehrhardt, N., Wellert, L., Bohl, T., & Lachner, A. (2025). Adaptive teaching with technology enhances lasting learning. *Learning and Instruction*, 99, 102141.
- Vongkulluksn, V. W., Lu, L., Nelson, M. J., & Xie, K. (2022). Cognitive engagement with technology scale: A validation study. *Educational Technology Research and Development*, 70(2), 419–445. <https://doi.org/10.1007/s11423-022-10098-9>
- Wajidi, M., Susanto, B., Sumartana, I. M., Sutiarsa, M. A., & Hadi, W. (2024). Profile of generation Z characteristics: Implications for contemporary educational approaches. *Kajian Pendidikan, Seni, Budaya, Sosial Dan Lingkungan*, 1(1), 33–44.