available at https://ejournal.melekliterasi.com/index.php/JLTLL/index

Published by *Meleklitrasi Press,* **Indonesia**

Vol. 3 No. 02 , December 2025
Page 153-166

Technology Integration in English Language Teaching: A SAMR-Based Analysis of Lecturers' Practices in Higher Education

Faiqotur Rizkiyah
Universitas KH. Mukhtar Syafaat, Banyuwangi
Faiqotur1012@iaida.ac.id

Received: February 11st, 2025. Revised: february 12th , 2026. Accepted: February 18th, 2026 Available Online: February 18th, 2026. Published Regulary: February, 2025

Keywords
Technology Integration, SAMR Framework, English Language Teaching

Corresponding Author
Faiqotur Rizkiyah

Universitas KH. Mukhtar Syafaat Banyuwangi

faiqotur1012@iaida.ac.id

Abstract

This study investigates how English lecturers integrate Information and Communication Technology (ICT) into their teaching practices using the SAMR (Substitution, Augmentation, Modification, Redefinition) framework. A qualitative case study was conducted at a private university in Banyuwangi involving six English lecturers. Data were collected through classroom observations and semi-structured interviews and analyzed using the interactive model of Miles and Huberman. The findings show that technology integration occurred at all four SAMR levels. At the substitution level, lecturers mainly used PowerPoint as a presentation medium, maintaining teacher-centered instruction. At the augmentation level, lecturers utilized online dictionaries, search engines, grammar-checking tools, and plagiarism detectors to improve instructional efficiency. At the modification level, collaborative writing, peer feedback, and video-based speaking activities reshaped classroom interaction. At the redefinition level, students created multimodal digital projects and communicated with authentic audiences through online platforms. Overall, technology shifted learning from lecturer-centered delivery toward interactive, collaborative, and authentic English language learning.

Introduction

The integration of Information and Communication Technologies (ICTs) into education has been widely discussed since the late twentieth century. Initially, the use of technology in education was considered supplementary, serving mainly as a supporting tool for administrative tasks and presentation media. However, in the twenty-first century the discussion has intensified significantly due to the emergence of digital transformation programs within school systems across many countries. These programs are closely linked to broader governmental policies aimed at promoting innovation, enhancing human capital, and strengthening global economic competitiveness (Lyddon, 2019; Bicalho et al., 2022). Consequently, education systems are increasingly expected to prepare students not only with subject knowledge but also with digital competencies necessary for participation in a technology-driven society.

The rapid development of digital technology has fundamentally transformed how knowledge is accessed, constructed, and shared. Learning is no longer limited to textbooks or teacher-centered lectures; instead, students engage with digital platforms, multimedia resources, and collaborative online environments. This shift encourages educators to integrate technology as an essential part of teaching, where it mediates communication, supports collaboration, and enables individualized learning, thereby changing the teacher's role from knowledge transmitter to learning facilitator. Futhermore, applying interactive learning really helps students in improving vocabulary(Rifai & Yunianti, 2024). Technology also provides important pedagogical benefits by influencing instructional strategies and improving teaching effectiveness (Celik et al., 2014; Tondeur et al., 2020; Risnanosanti et al., 2021). Through multimedia presentations, applications, and interactive tools such as PowerPoint, Prezi, and video materials, teachers can present concepts more clearly and attract students' attention. Moreover, these tools support differentiated instruction by accommodating diverse learning styles and paces, making classroom learning more engaging, interactive, and student-centered.

In the context of English language learning, the role of technology becomes even more significant. Language acquisition requires consistent exposure and frequent practice in four essential skills: listening, speaking, reading, and writing. Traditional classroom instruction often provides limited opportunities for authentic communication, especially in environments where English is not used in daily life. Technology helps overcome this limitation by offering students access to authentic language resources such as podcasts, online videos, interactive exercises, and

communication platforms. Through these resources, learners can observe pronunciation, sentence patterns, and vocabulary use in real-life contexts produced by native speakers (Alivi, 2019). Additionally, technology allows students to practice communication beyond classroom boundaries, for instance through discussion forums, video conferencing, or language learning applications. Therefore, technology does not only support language learning but also expands opportunities for meaningful interaction and learner autonomy.

Despite its potential, technology integration in education cannot be effective without a clear pedagogical framework. Simply using digital tools does not automatically improve learning outcomes. Educators need guidance to determine how technology should be used to enhance learning rather than merely replace traditional tools. One widely recognized framework addressing this need is the SAMR model (Substitution, Augmentation, Modification, and Redefinition) developed by Puentedura (2006). The SAMR model evaluates the level of technology integration in teaching practices and helps teachers understand how technology influences the learning process (Puentedura, 2006; Lie et al., 2020). The model proposes a progression of technology use, starting from basic substitution and culminating in transformative learning experiences that would be impossible without technology (Blundell et al., 2022; Wu et al., 2026).

The four stages of the SAMR model represent increasing levels of pedagogical impact. At the substitution stage, technology functions as a direct replacement for traditional tools without significant functional change, such as typing a document instead of handwriting it. At the augmentation stage, technology still replaces traditional tools but offers functional improvements, for instance using spell-check features or multimedia annotations. The modification stage allows substantial redesign of learning activities, such as collaborative writing through shared online platforms. Finally, the redefinition stage enables the creation of new learning tasks previously inconceivable without technology, such as global virtual collaboration projects or multimedia digital storytelling (Alfiana, 2021). This classification highlights that technology integration should ideally move beyond enhancement toward transformative learning.

The SAMR framework provides educators with a structured approach to evaluating and planning technology integration, encouraging them to move from conventional teaching practices toward innovative pedagogical strategies (Lyddon, 2019; Zamri et al., 2024). Because of its simplicity, clarity, and adaptability, the model has become widely recognized among teachers and educational practitioners (Bicalho et al., 2022). It serves as a reflective tool that helps teachers critically assess whether technology meaningfully enhances learning or merely digitizes traditional practices.

Previous research has demonstrated the usefulness of the SAMR model in various educational contexts. Studies have used the framework to evaluate student engagement in technology-enhanced learning (Dzulkarnain

et al., 2021), analyze teachers' perceptions and instructional practices (Setyaningsih et al., 2020), and improve teaching approaches in subjects such as English language learning (Nyayu et al., 2019) and music education (Calderón-Garrido et al., 2020). The model has also been applied in online learning environments (Alfiana, 2021), higher education institutions (Drugova et al., 2021), and STEM courses (Dzulkarnain et al., 2021). These studies suggest that the SAMR framework is effective for understanding and guiding technology integration across diverse disciplines and educational levels.

Nevertheless, the existence of a framework does not automatically guarantee successful implementation. Teachers may be familiar with digital tools but still use them at a basic level, primarily for substitution or augmentation. In such cases, technology does not fundamentally change learning experiences. Instead, it merely digitizes existing practices. Therefore, it is important to examine how educators actually integrate technology in real teaching situations and to what extent they reach transformative levels of implementation. This issue is particularly relevant in English language teaching, where meaningful interaction and authentic communication are essential components of learning.

Although previous studies have explored technology integration and the application of the SAMR framework, many of them focus primarily on perceptions, theoretical discussions, or general evaluations. Limited research has examined in detail how teachers practically implement technology in classroom instruction and what pedagogical implications arise from such implementation. In particular, there remains a need to understand how English lecturers adopt and apply technology within their instructional practices and how their level of integration influences learning experiences.

Therefore, this study aims to investigate how English lecturers integrate technology into their teaching practices using the SAMR framework as an analytical lens. By providing a clearer picture of real classroom practices, this research is expected to contribute to a deeper understanding of technology integration in higher education and offer insights for improving instructional design, teacher training, and educational policy related to digital learning.

Methodology

This study employed a qualitative approach using a case study design. The design was selected because it allows an in-depth exploration of a particular phenomenon within its real-life context (Creswell, 2012). The research aimed to investigate how English lecturers integrate technology into their teaching practices using the SAMR framework as an analytical lens.

The study was conducted at a private university in Banyuwangi, Universitas KH. Mukhtar Syafaat. The participants consisted of six lecturers from the English Language Education Department who were actively teaching English courses and utilizing digital technology in their instruction.

The participants were selected purposively to ensure that they had relevant experience with technology integration in teaching.

Data were collected through semi-structured interviews and classroom observations. The interviews were conducted to explore lecturers' perceptions, experiences, and considerations in using technology, while the observations were carried out to examine the actual implementation of technology during teaching and learning activities. The use of these two techniques enabled methodological triangulation to obtain comprehensive and reliable data.

The collected data were analyzed using the interactive model of Miles and Huberman (2020), which consists of three stages: data reduction, data display, and conclusion drawing/verification. During data reduction, the researcher selected and coded relevant information related to the SAMR framework. The data were then organized and presented systematically in the data display stage to facilitate interpretation. Finally, conclusions were drawn and continuously verified throughout the analysis process.

To ensure the trustworthiness of the findings, several strategies were applied. Credibility was established through triangulation of data sources and techniques, as well as member checking by confirming the interview results with the participants. Dependability was maintained by documenting the research procedures and maintaining an audit trail. Confirmability was ensured by grounding the interpretations in the collected data and minimizing researcher bias during analysis.

Research result

There are some levels in the result of the research found;

Substitution level

Based on classroom observations and semi-structured interviews, the lecturers' use of technology was largely situated at the substitution level of the SAMR framework. During the observed classes, all lecturers used PowerPoint (PPT) as the primary medium for presenting instructional materials. Rather than writing explanations on the whiteboard or distributing printed handouts, lecturers delivered explanations through prepared slides while students listened and took notes. The structure of the lesson, explanation patterns, and classroom interaction remained similar to traditional lectures, indicating that technology mainly replaced conventional tools without altering the pedagogical approach.

The interview data reinforced these observations. Several lecturers stated that the main reason for using PowerPoint was practicality and efficiency in delivering content. Lecturer F explained that slides helped them organize material systematically and made it easier to explain topics: *"Using PowerPoint makes the explanation more organized, and I don't need to write everything on the board."* Another lecturer, Mr A, mentioned that digital slides allowed them to save time during class: *"If I write on the whiteboard, it takes time. With slides, I can focus on explaining the material."* These responses

indicate that technology was perceived primarily as a tool to simplify presentation rather than to redesign learning activities.

Lecturers also reported using computers to prepare lecture notes, assignments, and examinations. Furthermore, they used electronic databases and online sources as references when preparing teaching materials. However, the observations showed that students were rarely involved in interactive digital activities during class sessions. Technology was primarily used by the lecturer, while students remained passive recipients of information. The learning process continued to be teacher-centered, and the digital tools functioned as presentation media and communication support rather than enabling collaborative or transformative learning experiences.

Augmentation level

At the augmentation stage, technology was not only used as a replacement for traditional tools but also provided functional improvements that supported teaching and learning activities. The observations and interview data indicate that lecturers began to utilize digital features that enhanced the quality of instruction and facilitated deeper engagement with learning materials. In line with the SAMR framework, technology at this level added functions that would be difficult to achieve through conventional methods, particularly in supporting content enrichment and academic tasks (Bicalho et al., 2023).

From the interviews, lecturers reported frequently using search engines such as Google to obtain academic materials, journal articles, and examples of authentic language use. This practice allowed lecturers to provide more up-to-date and contextualized explanations compared to relying solely on textbooks. Lecturers also used online dictionaries during teaching to clarify unfamiliar vocabulary and pronunciation. In several observed classes, lecturers directly accessed online dictionaries while explaining word meanings, enabling immediate clarification for students.

Additionally, lecturers utilized word processing applications with built-in features to support academic writing and document preparation. Interview responses revealed that they used grammar-checking tools to revise documents, as illustrated by Lecturer Z *"I usually check my writing using the grammar correction feature before giving it to students."*

They also employed editorial suggestions to find alternative words or phrases when preparing lecture materials or academic papers. Some lecturers reported using footnotes and citation tools to organize references properly and plagiarism detection applications to ensure academic integrity in students' assignments.

Although the learning activities still tended to be teacher-directed, technology at this stage enhanced instructional delivery and learning support. The digital tools helped lecturers access broader resources, improve document quality, and maintain academic standards. Therefore, the integration of technology in this phase demonstrated characteristics of

augmentation, where technology improved efficiency and functionality of teaching and academic tasks, even though it had not yet significantly transformed the structure of learning activities.

Modification level

The findings also reveal that several teaching practices reached the modification level of the SAMR framework. At this stage, technology no longer functioned merely to improve efficiency, but enabled a significant redesign of learning activities. Classroom observations showed that lecturers began to restructure instructional tasks so that students actively used digital tools as part of the learning process, particularly in English language learning activities.

During observed sessions, lecturers organized collaborative learning tasks using online platforms. Students were asked to work in groups to produce written texts, presentations, and language practice activities through shared digital documents. Instead of submitting handwritten assignments, students composed essays and short texts collaboratively using online word-processing tools. The lecturer monitored students' work in real time, provided comments directly on the document, and corrected grammatical errors while students were still working. This allowed immediate feedback and revision during the learning process. One lecturer explained in the interview, *"When students write in a shared document, I can directly comment on their grammar or vocabulary, and they revise it immediately. It makes the writing process more interactive."*

In speaking activities, technology also reshaped classroom interaction. Students recorded short presentations or dialogues using their mobile phones and uploaded the videos to an online classroom platform. The lecturer then asked other students to watch the recordings and provide peer feedback. As stated by a participant, *"I ask students to upload their speaking videos so their friends can respond and give comments. They become more confident because they can prepare before recording."* This activity differed from traditional oral presentations, as students had opportunities to review their performance, repeat recordings, and engage in asynchronous discussion.

Interview data further supported these observations. Lecturers stated that digital platforms helped them manage interaction and provide feedback more effectively. One lecturer noted, *"In the classroom, sometimes only a few students speak, but in the online discussion forum almost all students participate because they have time to think before answering."* Another added, *"Technology helps me track students' progress because I can see their revisions and comments."*

These practices demonstrate that technology enabled the redesign of learning tasks and interaction patterns. The focus of instruction shifted from lecturer explanation to student activity, collaboration, and feedback. Students were no longer passive recipients of information; instead, they engaged in

producing language, revising their work, and interacting with peers through digital platforms. Therefore, the integration of technology at this stage reflects the modification level, where teaching strategies and learning activities were significantly altered through the use of technology, although the tasks themselves were still related to conventional classroom objectives.

Redefinition level

The findings further indicate that some instructional practices reached the redefinition level of the SAMR framework. At this stage, technology enabled learning activities that would have been impossible to conduct in a traditional classroom environment. Both observations and interview data show that lecturers designed tasks in which students interacted with broader audiences, and created multimodal products.

In several classes, students were assigned to produce digital projects such as video presentations, podcasts, and social media content in English. Rather than submitting assignments solely to the lecturer, students published their work on online platforms, allowing wider audiences to access and respond to their output. For example, students created short English-speaking videos and uploaded them to video-sharing platforms. Other students were required to watch, comment, and provide constructive feedback. Lecturer D explained during the interview, *"I ask students to upload their speaking project online so they feel they are speaking to real audiences, not only to the lecturer."* This activity encouraged students to pay more attention to pronunciation, fluency, and message clarity because their work could be viewed publicly.

Technology also allowed students to integrate multiple language skills simultaneously. In one observed activity, students worked in groups to design digital storytelling projects combining images, narration, subtitles, and background music. The project required students to write scripts, practice speaking, edit recordings, and revise language accuracy before publication. The lecturer functioned mainly as a facilitator by giving feedback on drafts and guiding the revision process. As a lecturer noted, *"Students learn not only writing or speaking separately; they combine skills when producing a digital project."*

These activities demonstrate a shift from technology as a supporting tool to technology as a learning environment. Students engaged in authentic communication, collaborative production, and creative expression using digital media. The learning process extended beyond classroom boundaries and connected students with real audiences and real communication purposes. Consequently, the role of the lecturer changed into a mentor who guided project development rather than a primary source of knowledge.

Overall, the integration of technology at this stage reflects the redefinition level of the SAMR model. Technology enabled new forms of learning tasks that were previously inconceivable without digital tools, particularly in providing authentic language use, broader interaction, and

multimodal language production. This level represents a transformative use of technology in English language teaching, where learning experiences were expanded beyond traditional classroom practices and students became active creators of knowledge and communication.

Discussion

The findings demonstrate that English lecturers integrated technology at multiple levels of the SAMR framework, ranging from substitution to redefinition. The progression across these stages indicates that technology integration in English Language Teaching (ELT) was not uniform, but developed gradually according to lecturers' pedagogical beliefs, digital competence, and instructional goals. The results also suggest that technology adoption in higher education often begins with efficiency-oriented use before moving toward pedagogical transformation.

At the substitution level, technology mainly functioned as a direct replacement for traditional teaching tools. The use of PowerPoint as the primary instructional medium shows that lecturers employed digital tools primarily to improve practicality and time efficiency rather than to change the learning process. Classroom interaction patterns remained teacher-centered, and students largely acted as recipients of information. This finding aligns with Puentedura's (2014) explanation that substitution occurs when technology substitutes conventional tools without functional change in pedagogy. Similarly, previous studies on technology adoption in education have found that teachers commonly begin integration by digitizing existing practices, such as replacing whiteboards or printed materials with presentation software. This phenomenon also reflects the early stage of technological pedagogical knowledge development, where instructors emphasize technological convenience rather than instructional redesign (Alfiana, 2021).

The results can also be interpreted through the TPACK (Technological Pedagogical Content Knowledge) framework proposed by Mishra and Koehler (2006). At the substitution stage, lecturers mainly demonstrated technological knowledge (TK) without strong integration with pedagogical knowledge (PK). They understood how to operate digital tools, but these tools did not significantly influence instructional strategies. Consequently, learning remained lecture-based and teacher-dominated. This explains why students had limited participation in digital activities despite the presence of technology in the classroom.

At the augmentation level, Technology, at this level, enhances the teaching experience by adding features to the process that would not be possible without it (Bicalho, et. al. 2022). Lecturers accessed online journals, dictionaries, and digital references, and used grammar-checking tools and plagiarism detection software. These practices indicate that technology enhanced instructional quality and resource accessibility. In language learning, access to authentic materials is particularly important because

exposure to real language use contributes to vocabulary development and contextual understanding. The use of online dictionaries and authentic examples allowed lecturers to provide immediate clarification, supporting students' comprehension and reducing learning barriers.

This stage reflects what Puentedura (2006) describes as functional improvement, where technology improves efficiency and task performance. Although teaching was still largely teacher-directed, technology enriched the learning environment and supported academic literacy skills such as referencing, citation, and academic writing. The findings also correspond with constructivist learning theory (Vygotsky, 1978), which emphasizes the importance of scaffolding. Digital tools acted as scaffolding mechanisms by assisting both lecturers and students in understanding language forms, correcting errors, and accessing broader knowledge resources. However, learning activities had not yet fundamentally changed because students were still not the main users of technology.

A more significant shift appeared at the modification level. Here, the technology begins to alter how tasks are completed; this level begins to transform the learning (Boonmoh, et. al. 2023). Students collaborated through shared documents, produced written texts, and received real-time feedback from lecturers. Unlike traditional writing instruction, feedback was immediate and iterative. This finding is important because feedback plays a crucial role in second language acquisition. According to interactionist theory in SLA (Long, 1996), language learning improves when learners receive timely corrective feedback during communication. The shared digital documents allowed lecturers to provide feedback during the learning process rather than after task completion, thereby enhancing learning effectiveness.

At this stage, technology integration also reflected student-centered learning. The lecturer's role shifted from information provider to facilitator, consistent with constructivist pedagogy. Learning was no longer dominated by explanation but by activity, interaction, and revision. Therefore, technology functioned not only as a tool but as a medium for collaborative knowledge construction.

The most transformative integration appeared at the redefinition level. Students created multimodal digital projects, such as videos, podcasts, and digital storytelling, and shared them with public audiences. These activities would have been impossible in a conventional classroom environment. The learning process extended beyond classroom boundaries and connected students with authentic communication contexts. Authentic communication is a key principle in communicative language teaching (CLT), which emphasizes meaningful language use rather than isolated language practice (Richards, 2006). By publishing content online, students used English for real purposes, not merely for evaluation.

This level also demonstrates the development of 21st-century skills, including creativity, communication, collaboration, and digital literacy (Partnership for 21st Century Learning, 2019). Students integrated multiple

language skills simultaneously: writing scripts, practicing speaking, editing media, and interacting with audiences. Such activities represent experiential learning (Kolb, 1984), where knowledge is constructed through active creation and reflection. The lecturer's role as a mentor further indicates a shift toward heutagogical learning, in which learners take responsibility for their learning process and produce independent work.

Overall, the findings confirm that meaningful technology integration is not achieved merely by providing digital tools but by redesigning pedagogy. The SAMR progression observed in this study illustrates a developmental pathway: efficiency-oriented use (substitution), functional improvement (augmentation), instructional redesign (modification), and learning transformation (redefinition). The results suggest that higher levels of technology integration are closely associated with student-centered pedagogy, collaborative learning, and authentic communication practices in ELT.

Therefore, the study implies that professional development for lecturers should not focus solely on technical training. Instead, it should emphasize pedagogical strategies for designing interactive, collaborative, and authentic learning activities using technology. Without pedagogical transformation, technology risks remaining only a presentation aid rather than a catalyst for meaningful language learning.

Conclusion

This study examined how English lecturers integrated technology into their teaching using the SAMR framework. The findings show that technology was used at all four levels, but with different impacts on learning. At the substitution level, tools such as PowerPoint mainly replaced traditional media and the teaching remained teacher-centered. At the augmentation level, lecturers used online dictionaries, digital references, grammar-checking tools, plagiarism detectors, and video-conferencing platforms to improve instructional support and access to authentic materials. More substantial change appeared at the modification level, where collaborative writing, online discussions, real-time feedback, and video-based speaking tasks encouraged students to actively participate and shifted the lecturer's role toward facilitator. At the redefinition level, students created multimodal projects such as digital storytelling, podcasts, and publicly shared speaking videos, allowing authentic communication with wider audiences. Overall, the study indicates that the SAMR framework illustrates a gradual movement from efficiency-based technology use to transformative learning, and meaningful integration depends not only on the availability of digital tools but also on purposeful pedagogical design that promotes interaction, collaboration, and communicative competence.

Recommendation:

The study suggests that English lecturers should move beyond using technology only for presenting material and begin designing learning activities that promote student participation, collaboration, and authentic language practice. Activities such as project-based learning, online discussions, peer feedback, and digital storytelling can help students actively use English rather than passively receive information. Students also need guidance in digital literacy, responsible technology use, and academic integrity so that technology supports meaningful learning.

At the institutional level, universities should provide continuous professional development that emphasizes pedagogical strategies, not only technical skills. Training based on frameworks such as SAMR and TPACK can help lecturers align learning objectives with appropriate digital tools. Adequate infrastructure, reliable internet access, and supportive learning platforms are also necessary. Future research is recommended to explore technology integration in different contexts and its impact on specific language skills and learning outcomes

Bibliography

Alivi, J. S. (2019). A Review of TPACK and SAMR Models: How Should L anguage Teachers Adopt Technology? Journal of English for Academic and Specific Purposes, 2(2). https://doi.org/DOI: 10.18860/jeasp.v2i2.7944

Alfiana, H. (2021). Peningkatan model samr serta penerapannya untuk pembelajaran online yang mendalam. Jurnal Inovasi Teknologi Pendidikan, 8(1). https://doi.org/10.21831/jitp.v8i1.42026

Bicalho, R., Coll, C., Engel, A., & Oliveira, M. (2022). Integration of ICTs in Teaching Practices: Propositions to The SAMR Model. Educational Technology Research and Development, 71(2), 563-578. https://doi.org/10.1007/s11423-022-10169-x

Blundell, C. N., Mukherjee, M., & Nykvist, S. (2022). A scoping review of the application of the SAMR model in research. *Computers and Education Open*, *3*, 100093. https://doi.org/10.1016/j.caeo.2022.100093

Boonmoh, A., & Kulavichian, I. (2023). Exploring Thai EFL pre-service teachers' technology integration based on SAMR model. Contemporary Educational Technology, 15(4), ep457. https://doi.org/10.30935/cedtech/13567

Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE Publications.

Drugova, E., Zhuravleva, I., Aiusheeva, M., & Grits, D. (2021). Toward A Model of Learning Innovation Integration: TPACK-SAMR Based Analysis of the Introduction of A Digital Learning Environment in Three Russian Universities. *Education and Information Technologies, 26,* 4925-4942. https://doi.org/10.1007/s10639-021-10514-2

Dzulkarnain, I., Aziz, N., & Khuluqo, I. (2021). Student engagement in university stem course through digital video project using samr model.. https://doi.org/10.2991/assehr.k.210430.008

Kihoza, P., Zlotnikova, I., Bada, J., & Kalegele, K. (2016). Classroom ICT Integration in Tanzania: Opportunities and Challenges from the Perspectives of TPACK and SAMR Models. *International Journal of Education and Development Using Information and Communication Technology*, *12*(1), 107–128.

Kolb, D. A. (1984). Experiential Learning: Experience as the Source of Learning and Development. Englewood Cliffs, NJ: Prentice Hall. http://academic.regis.edu/ed205/Kolb.pdf

Lie, A., Tamah, S., Gozali, I., Triwidayati, K., Utami, T., & Jemadi, F. (2020). Secondary school language teachers' online learning engagement during the covid-19 pandemic in indonesia. Journal of Information Technology Education Research, 19, 803-832. https://doi.org/10.28945/4626

Lyddon, P. (2019). A reflective approach to digital technology implementation in language teaching: expanding pedagogical capacity by rethinking substitution, augmentation, modification, and redefinition. Tesl Canada Journal, 36(3), 186-200. https://doi.org/10.18806/tesl.v36i3.1327.

Nyayu, S., Setiawan, H., & Sulaiman, M. (2019). The use of technology integration samr model in teaching english. Ideas Journal on English Language Teaching and Learning Linguistics and Literature, 7(1). https://doi.org/10.24256/ideas.v7i1.720

Puentedura, R.R. (n.d.) Transformation, Technology and Education: A Model for Technology and Transformation. http://hippasus.com/resources/tte/puentedura_tte.pdf

Rifai, D. M., & Yunianti, S. S. (2024). FLASHCARD TO IMPROVE STUDENTS' VOCABULARY ABILITIES (Vol. 02, Number 1). Meleklitrasi Press. https://ejournal.melekliterasi.com/index.php/JLTLL/article/view/44/34

Risnanosanti, Ramadianti, W., Syofiana, M., & Raniwati, D. M. (2021). Level TPACK Guru Matematika melalui Model SAMR dan Komunitas Belajar Berbasis Lesson Study. Jurnal E-DuMath, 8(2), 66–75.

Wu, J., Pan, J., Zhou, Y., Liu, M., Li, Y., & Huang, R. (2026). An active instructional approach based on the SAMR framework: Integrating AIGC into undergraduate freshmen learning. The Internet and Higher Education, 68, 101056. https://doi.org/10.1016/j.iheduc.2025.101056