



Language Learning Technologies to Support Indonesian EFL Students' Writing Skills: A Literature Review

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Abstract

The utilization of technology in educational settings, particularly in the context of English as a Foreign Language (EFL) instruction, exerts a substantial influence on students' writing abilities. This research study undertakes a comprehensive analysis of the impact of Technology Assisted Language Learning (TALL) on the writing proficiency of EFL students in Indonesia. The study is informed by a systematic review of diverse studies conducted over the past decade. The primary focus of this analysis is to examine how technological tools enhance students' writing abilities. The findings indicate that TALL enhances writing proficiency through interactive learning, prompt feedback, and collaborative activities. However, the study also identifies challenges, including a lack of teacher preparation and limited access to technology. The study's conclusion emphasizes that while TALL offers numerous benefits, addressing these issues is crucial to maximize its efficacy. Recommendations for optimizing TALL include increased investment in technology infrastructure, professional development for educators, and integration of TALL in the curriculum.

Keywords: *TALL learning, EFL Education, writing skills*

INTRODUCCTION

The integration of Technology-Assisted Language Learning is important leverage in English language teaching how to help students learn well has been an ongoing topic in education, and researchers and educators have been interested in learner-centered approaches to improving individual learning efficacy for a long time (Chen, Zou, Cheng, et al., 2020; Chen et al., 2020). The integration helps language learners to enhance engagement and motivation, Interactive and multimedia resources increase student interest, Adaptive learning technologies tailor content to individual student needs, Availability of real-world language resources, and Tools like grammar checkers and speech recognition software provide instant feedback. Such knowledge and skills will help the madapt to modern society and will enhance their competitiveness (Shadiev, et al., 2022 a,b). Regretfully, many students still struggle to write clearly and effectively both in terms of syntax and structure and to express themselves in their writing. Prior studies have demonstrated that a variety of issues, including a lack of systematic supervision, organized practice, and constructive feedback, frequently contribute to students' poor writing abilities. The idea of TALL (Technology-Assisted Language Learning) captures this inclination for cutting-edge technology in educational settings. TALL uses digital tools and computers to improve language acquisition. A more dynamic and engaging learning environment can be created when students use technology in their language studies (An et al., 2021). TALL has demonstrated promise in assisting EFL (English as a Foreign Language) students with their writing skills.

In Indonesia English is taught as a foreign language. Despite the difficulties brought about by scarce resources and uneven access to high-quality education among its numerous islands, Indonesia has embraced technology developments more and more to improve language acquisition. This article explores the use of technology-assisted language learning (TALL) in Indonesia, with a special emphasis on how it helps EFL students' writing abilities. Moses and Mohamad (2019) language instructors face considerable difficulties with teaching the writing skill and motivating learners to write more and better mainly as a result of inadequate vocabulary knowledge and poor spelling and grammar. So, we seek to understand the effectiveness, difficulties, and promise of TALL in closing educational gaps and promoting improved language proficiency among Indonesian learners through a study of the body of existing literature.

Numerous advantages have been demonstrated by the use of technology in writing training for English as a Foreign Language (EFL). First of all, technology provides access to a multitude of tools and materials that might improve education. Grammar checkers, thesauri, and online dictionaries all assist pupils in developing their vocabulary and grammatical accuracy. Furthermore, word processors with integrated editing tools help students create well-written, cohesive documents. Peer review and collaborative writing are made easier by collaborative tools like Google Docs, which promote an interesting and dynamic learning environment. Additionally, blogs, discussion boards, and e-portfolios offered by digital platforms offer chances for real-world writing experiences that can inspire students and help them see how their writing abilities are put to use in the real world. Writing assignments can be made more interesting with the use of digital tools like interactive platforms and gamified writing apps, which will boost student engagement and motivation. Ly et al. (2021), this happens as a result of the short time available to students during virtual learning sessions with lecturers, errors in the presentation of content, and insufficient feedback on students' work.

The use of technology-assisted language learning (TALL) in EFL writing teaching has advantages, but there are drawbacks as well. The digital divide, in which differences in access to technology can impede equitable learning opportunities for all pupils, is one important problem. Furthermore, using new technology tools comes with a steep learning curve that can be scary for teachers and students alike. Technical problems can impede learning and lead to frustration. Examples of these problems include software bugs and unstable internet connections. Further more, there is worry that a reliance on technology too much could prevent children from developing basic writing abilities since they would become overly reliant on automated programs for editing. Last but not least, successful curriculum integration of technology calls for extensive professional development and resource-intensive support for teachers.

In supporting Indonesia EFL students' writing skills, TALL apparently still lacks in conducting a comprehensive review when analyzing existing research, methodological considerations, and relevant theoretical frameworks. Not only humans have advantages and disadvantages. This also applies to technology which has previously been explained as having disadvantages and it is possible that it also has advantages. (Yan, 2023) investigated the impact of ChatGPT, an AI-assisted language learning tool, on EFL learners' writing skills and reported significant improvements in their writing performance as a result of AI-assisted language learning. The novelty of this review lies in the focus given to a holistic understanding of how technology can be optimally utilized to facilitate writing development among EFL learners, taking into account both pedagogical and technological aspects. EFL students' learning outcomes can benefit from the integration of novelty in TALL. Research has shown that innovative teaching methods can result in greater learner autonomy, better composition skills, and higher levels of

overall language competence. This novelty in technology can also help develop critical thinking and problem-solving skills, two things necessary for professional English communication.

Besides that, the important role that technology plays in improving the writing skills of students studying English as a foreign language (EFL). English as a Foreign Language learning has become increasingly important in today's globalized (Salih & Holi, 2018). So, the aim of this review is to investigate how technology influences language acquisition, particularly as it relates to the development of EFL learners' writing skills. Researchers and educators alike must understand the effectiveness of technology in this field as more and more education is integrating it. Generally, students need a thorough grasp of writing theories and practical assistance from the instructor throughout their writing practice (Lin, 2009; Ndoricimpa & Barad, 2021; Le, 2021). Teachers can build a more dynamic and captivating learning environment that encourages creativity, motivation, and successful communication among EFL students by embracing innovation in TALL.

Additionally, novelty can help students feel less stressed and anxious when completing writing assignments, allowing them to concentrate more on the creative than the technical components of writing. Finally, the novelty factor may be adjusted to meet the various requirements and preferences of individual students, guaranteeing that every learner gets a customized education that takes into account their particular advantages and disadvantages. In the area of interest of English as a Foreign Language (EFL) education, the integration of technology-assisted language learning (TALL) tools to improve represents a growing for students' writing skills. Despite advances in educational technology, there is still a real research gap regarding the effectiveness, best practices, and overall impact of TALL specifically on EFL students' writing proficiency. (Fathi and Rahimi, 2022) this research gap assumes heightened significance in light of the pervasive challenges faced by EFL learners, often struggling to allocate sufficient time for refining their writing skills, consequently hampering their overall writing competence. The existing literature often lacks a comprehensive synthesis of research findings and identification of critical gaps that require further investigation.

In addition, the theoretical basis underlying the integration of TALL in language learning contexts also requires deeper exploration and analysis. (Huang, 2022; Zhang, 2021) said that emotional involvement plays a very important role in shaping the EFL learning experience student in this case context. With the use of technology, EFL learners can effectively overcome problems including inadequate writing practice and limited access to real-world language use. Like the sentence individuals seek to improve their language skills for academic, professional, and personal reasons, the need for effective and engaging EFL learning approaches have grown significantly (Alemi, 2016; Liu, 2022). Our goal in conducting this comprehensive evaluation was to determine how best to use technology to help EFL students' writing skills improve significantly and lastingly. The primary research question that motivates this study is: How does technology-assisted language learning (TALL) affect and support the development of students' Writing skills in English as a foreign language (EFL)? What effects do different technology-assisted language learning (TALL) tools have on EFL students' writing proficiency in terms of accurate grammar, coherent writing, and vocabulary usage? And What are the best practices for integrating TALL into the curriculum to support the writing skills of Indonesian EFL students?. These questions are intended to explore specific ways in which various technological tools and platforms can improve the efficiency of writing, with an emphasis on elements such as word choice, language comprehension, coherence in writing, and composition in a comprehensive way.

Furthermore, in this study will assess the effectiveness of several technological domains, such as computer literacy programs, online collaboration tools, and language learning applications, in order to enhance EFL students' writing skills. These questions are intended to explore specific ways in which various technological tools and platforms can improve the efficiency of writing, with an emphasis on elements such as word choice, language comprehension, coherence in writing, and composition in a comprehensive way. The main goal of this research is to provide comprehensive knowledge of existing studies and literature regarding the use of TALL in reducing the reading fatigue of EFL students. This highlights the need for systematic empirical research to identify the benefits and potential risks associated with integrating technology into EFL instruction. The primary goal is to assess the technology's damping power in many writing aspects, such as fluency, accuracy, and complexity. Now, this study aims to provide practical recommendations to teachers and researchers regarding effective TALL implementation in EFL curricula to enhance students' proficiency in language learning in all domains.

LITERATURE REVIEW

The term "technology-Assisted Language Learning" (TALL) describes the process of learning a language via the use of digital tools and materials. TALL refers to a wide range of applications in the context of teaching English as a foreign language (EFL), including web platforms, mobile apps, interactive multimedia materials, and computer-assisted language learning (CALL) software. Thus, the Web has expanded language learning elsewhere the classroom and resources of English learning in the kind of visual, audio and written materials have been conveyed collectively and issued online (Warschauer M., & Ware, M., 2008; Crook, et.al., 2008; Zeng, 2018). TALL seeks to offer learning experiences that are immersive, dynamic, and adaptable in order to improve language acquisition.

Recent research on Technology-Assisted Language Learning (TALL) in Indonesia has demonstrated how important it is for improving EFL students' writing abilities. The competencies emphasize the necessity of technology integration (see Mali & Timotius, 2018). Researchers in Indonesia have investigated a range of digital technologies, such as automated feedback systems, educational apps, and online writing platforms, and they have shown that these tools improve student proficiency and engagement. For example, online learning environments like Grammarly and Google Classroom, which provide instant feedback, have been incorporated into EFL programs. Research also highlights the significance of institutional support and teacher preparation for the successful implementation of TALL, highlighting obstacles such as infrastructure constraints and deficits in digital literacy. Overall, research suggests that TALL has great potential to enhance EFL writing abilities in Indonesian educational settings, even in the face of some obstacles.

For the desire to address a range of learning requirements, boost student involvement, and offer flexible learning possibilities outside of typical classroom settings has led to the inclusion of TALL in EFL instruction. TALL's main goal is to improve language acquisition through immersive, dynamic, and flexible learning experiences. TALL provides flexible learning possibilities that can be accessible outside of traditional classroom environments, enhances student engagement, and covers a variety of learning requirements by combining a variety of digital resources. This flexibility is especially helpful for students who have varying schedules and learning preferences. TALL has therefore emerged as a crucial element of EFL training in response to the expanding need for cutting-edge and successful language learning strategies.

Then the Instant feedback on writing faults is provided by programs like AWE and grammar checkers, which assist students in recognizing and fixing errors fast. A wide variety of real English texts are available online and can be used as sources or writing models for assignments involving research writing. The effects of technology-assisted language learning on EFL students' writing abilities have been widely studied empirically, with usually positive results. Research has indicated that the utilization of technology can greatly improve several facets of writing, such as the acquisition of vocabulary, mastery of grammar, and general coherence. Another mobile phones have been used widely in modern society, and their use has been expanded to educational settings (Nazari and Xodabande, (2020). Peer review and group writing assignments are made easier by online platforms, which promote community and group learning. With the use of adaptive learning technologies, students' writing assignments may be customized to meet their unique needs, guaranteeing that every student gets the right kind of assistance and challenge.

The use of Technology-Assisted Language Learning (TALL) in EFL writing education offers several advantages but also presents challenges, particularly regarding access to reliable technology and the internet in resource-limited settings. Educators must be well-versed in both effective educational strategies and the technology itself to utilize TALL effectively. Some students may prefer traditional teaching methods due to unfamiliarity or resistance to technology. While automated feedback systems provide quick responses, they often lack the contextual awareness of human feedback. Additionally, aligning TALL activities with existing curricula requires careful planning and flexibility. Overall, TALL has shown promise in enhancing the writing skills of EFL students through various approaches.

METHOD

A methodical approach to collect, evaluate, and summarize previous research results is carried out through a systematic literature review, which ensures a thorough and repeatable procedure, kslnxhix In addition, systematic methods allow a thorough analysis of the current body of literature, which is necessary given the complexity of the subject and the need to critically assess multiple points of view. This approach makes it easier to spot patterns, trends, and research gaps, resulting in a more sophisticated understanding of how technology-assisted language learning helps Indonesian students improve their EFL writing skills. Systematic literature reviews are helpful for synthesizing current knowledge, as noted by Kohnke and Moorhouse (2020), technology reviews should cover a large and growing number of resources and media such as apps, websites, digital media, digital online resources, downloadable software, and other technology tools. They provide insight into the theoretical framework as well as practical implications for educational initiatives. Therefore, this study intends to provide a strong foundation for continuing research and guide pedagogical practice in the context of EFL writing teaching in Indonesia using a systematic literature review methodology.

Strict inclusion standards will be used to guarantee the caliber and applicability of the gathered literature. First off, only research published after 2019 will be eligible for inclusion. Second, research need to focus on how Indonesian EFL learners employ technology-enhanced writing instruction, given the country's EFL setting. Studies that meet the inclusion criteria will also cover a range of research designs, such as mixed-methods, experimental, and quasi-experimental studies, as well as qualitative investigations, In studies exploring the use of technology in language learning, inclusion criteria often involve selecting research that specifically addresses the target population, in this case, Indonesian EFL students, and focuses on technology-assisted writing skills.

Articles published in peer-reviewed journals within the last five years provide a contemporary perspective on the topic (Ahmad, 2019). Through the use of a variety of study approaches, the review aims to offer a comprehensive overview of the subject, taking into account both qualitative and quantitative data to guide future research directions and practice in the field of EFL instruction in Indonesia.

The study's exclusion criteria are meant to specify the bounds within which pertinent studies are chosen for the review. In particular, studies that do not concentrate on the improvement of writing skills of Indonesian English as a Foreign Language (EFL) students through technology-assisted language learning (TALL) are excluded from the criterion. Studies that look into other facets of language learning, such speaking abilities or reading comprehension, are therefore excluded. Furthermore, research that do not employ technology to promote language acquisition or that do not involve Indonesian EFL students are not included. The review's scope is further refined by the exclusion criteria, which omit research that don't adhere to certain methodological requirements. Research undertaken outside of the last five years or published in non-peer reviewed publications might not meet the strict academic requirements and be relevant enough for a thorough literature analysis.(Chen, 2022).

Studies that, for example, don't present dependable results, don't give enough information or analysis, or don't have a defined research strategy are excluded. This guarantees that the review concentrates on solid research that offers convincing proof of TALL's efficacy in enhancing Indonesian EFL students' writing abilities. To keep the study's emphasis, studies that concentrate on speaking or reading in addition to writing in EFL should be disregarded, as well as research that does not specifically address the use of technology to support EFL writing skills.(Wang, 2021). By using these exclusion criteria, the review hopes to give educators and policymakers an accurate and thorough overview of the body of research on the subject and help them make decisions about how best to use technology-assisted language learning approaches to improve writing skills in Indonesian EFL students.

Systematic search techniques will be employed as part of the data gathering procedure for the literature review in order to locate pertinent research from reliable academic databases. Google Scholar and Semantics Scholar. Furthermore, the search will only include articles that were published in 2019 or later in order to guarantee that current research and developing trends are included. The methodology section will provide predetermined inclusion criteria that will be followed during the data collection process in order to identify studies that fit the research objectives and make a valuable contribution to the synthesis of current knowledge on the subject. The literature review attempts to provide a thorough overview of the current state of research on technology-assisted language learning in supporting Indonesia's EFL students' writing skills through a rigorous and systematic data collection approach, guiding future research directions and pedagogical practices in the field.

A theme analysis approach is probably going to be used in the examination of the information gleaned from the literature review. Themes regarding the efficiency, difficulties, and potential advantages of TALL in EFL writing teaching for Indonesian students can be found and investigated through a methodical process of classifying and categorizing data. Furthermore, statistical analysis methods like descriptive and inferential statistics can be applied to quantitative data obtained by structured surveys in addition to thematic analysis. The literature review attempts to provide a thorough understanding of the research topic by integrating qualitative and quantitative data analysis approaches. It does this by providing insights into both the qualitative aspects of

students' experiences with TALL and the quantitative evidence demonstrating its efficacy in the Indonesian EFL context.

Important academic databases like Semantics Scholar and Google Scholar will be thoroughly searched to guarantee the retrieval of pertinent content. The search approach attempts to find a wide range of literature relevant to the investigation of TALL's involvement in enhancing EFL writing skills among Indonesian students by methodically searching numerous databases and using an extensive set of keywords and search terms. As for the methodology of the present systematic review, the researcher went through the stages of literature identification, screening for inclusion, quality and eligibility assessment, and data extraction, analysis and synthesis (Xiao & Watson, 2019).

FINDINGS & DISCUSSION

In evaluating the literature on Technology-Assisted Language Learning (TALL) for boosting Indonesian EFL students' writing skills, various themes emerge. Studies regularly emphasize the favorable influence of TALL on student engagement and writing proficiency. One key theme is the development of writing accuracy through quick feedback mechanisms supplied by various technology tools. A noteworthy trend that may be linked to the interactive and user-friendly character of many TALL programs is the rise in student motivation and autonomy. Additionally, a number of studies highlight how collaborative platforms support peer evaluation and group learning, both of which are essential for the development of EFL writing.

Additionally, research show that TALL programs frequently incorporate multimedia materials, which accommodate various learning preferences and enhance students' overall writing abilities. It has been demonstrated that certain technologies, including grammar checkers and automated essay scoring systems, can assist students in recognizing and fixing mistakes on their own, promoting self-regulated learning. Furthermore, it has been discovered that using blogging and digital storytelling platforms promotes originality and genuine language use, which makes writing more interesting for EFL students. Numerous implications for the application of TALL in EFL writing instruction are revealed by the synthesis of the analyzed studies. First off, the steady increase in writing correctness indicates that TALL can successfully handle basic syntactic and grammatical problems encountered by Indonesian EFL students. This is especially crucial when it comes to academic writing and standardized testing, when precision is crucial. Second, the rise in student autonomy and motivation suggests that learner-centered approaches can be promoted by TALL technologies, enabling students to take charge of their education.

Although the literature also points to a number of difficulties and shortcomings in spite of these favorable results. One significant gap is the requirement for additional longitudinal research to evaluate TALL's long-term effects on the development of writing abilities. Furthermore, a dearth of thorough studies exists about the integration of many TALL apps into a coherent curriculum, despite the fact that many studies concentrate on the efficacy of certain tools. Another issue is the digital gap, which may prevent TALL from being widely adopted as access to technology is still unequal in Indonesia's many regions. The conclusions drawn from this study of the literature have a number of applications for educators and decision-makers. Enough technology infrastructure and teacher training are necessary to assist EFL writers' development in an efficient manner. TALL should be carefully included into the curriculum to ensure that technology enhances rather than replaces conventional pedagogical methods. Furthermore, it's critical to take into account the particular requirements and preferences of Indonesian EFL students and modify TALL programs to fit their particular situation.

Table 1
Data Extraction

No	Author	Title	Published Year	Population	Intervention	Comparison	Outcomes	Study Design	Publisher
1.	Yustinus Calvin Gai Mali, Thomas Lee Salsbury	TECHNOLOGY INTEGRATION IN AN INDONESIAN EFL WRITING CLASSROOM	July 2021	3 participants	Interview and table checklist	technology integration in EFL writing	In this study, we limited the term technology to software and the Internet to facilitate the students' writing process.	qualitative	Google Scholar
2.	Tran Thi My Linh, Nguyen ThiThanh Ha	The Impacts of Technology-based Communication on EFL Students' Writing	08/10/2021	42 items	Test and questionnaire	Impacts of Technology on EFL Students' Writing	The results also conveyed participants' optimistic feelings on technology-based communication, their higher self-confidence in accordance with positive attitudes towards	quantitative	Google Scholar

								writing lessons thanks to their awareness of their promoting critical thinking as well as error identification.		
3.	RustamShadiev and Xun Wang	A Review of Research on Technology-Supported Language Learning and 21st Century Skills	07 2022	July	34 articles	Data Analysis		this study made several recommendati ons for stakeholders such as educators and researchers in the field.	systematic review	Google Scholar
4.	Fan Su & Di Zou	Technology-enhanced collaborative language learning: theoretical foundations, technologies, and implications	14 2020	Oct	40 articles	Data analysis	Collaborativ e learning of computer assisted language learning	The results showed 10 theoretical frameworks, nine types of technologies, and 11 benefits of technology-enhanced collaborative language	Systematic Review	Semantics Shcholar

								learning.		
5.	Abdulfattah Omar	Exploration of EFL Freshman Law Students' Attitudes on Telegram Messenger Usability in a Legal Terminology Course	December 2022	32 students	Convenience sampling and survey questionnaire	Exploration of Law Students' Attitudes on Telegram Messenger	The findings reveal a multi-faceted and very clear picture of Telegram Messenger as an informal form of virtual learning media	quantitative	Google Scholar	
6.	DwiSloriaSuharti	The needs of assistive technology on students' EFL writing	July 2019		questionnaire and interview	assistive technology on students' EFL writing	The outcome of this study offers thinkable instructional suggestions for students'	qualitative	Google Scholar	
7.	DidinNuruddinHi dayat	Digital technology supporting English learning among Indonesian university	25 April 2022	496 students	Survey and questionnaire method	Digital technology in English learning among Indonesian university	The findings show that online activities, skills, and perceived usefulness were positively correlated with positive experiences of	Quantitative	Researchgate	

							learning English online.		
8.	M. Syafi'i	Enhancing EFL Students' Writing Skills Through Blogging in Indonesian Vocational High School	13-06-2024	18 participants	Test	Enhancing Students' Writing blog in Indonesia Vocational High School	The findings revealed significant improvements in students' writing, as evidenced by higher post-test scores in unity, completeness, coherence, and spatial order.	quantitative	Researchgate
9.	Ali Jahangard	Student attitudes towards computer-assisted language learning and its effect on their EFL writing	25 August 2021	30 EFL learners	Questionnaire	Student attitudes effect on their EFL writing	the results related to the degree of exhibition to CALL suggested that most of the participants felt comfortable while using the CALL software.	Quantitative	Google Scholar

10.	Akbar BahariEt al	Revisiting technology-assisted language learning affordances for language components: a decade survey	29 January 2024	201 articles	coding process	a review of technology-assisted language component learning capabilities	Results revealed that different TALL platforms (viz. computer, mobile, tablet, virtual reality, and robot) help improve students' language learning performance and efficacy among the five language components.	Systematic and quantitative	Google Scholar
11.	NarinMatban	Exploring Parental Attitudes Towards Technology-Assisted English Language Learning(TALL) For Young Children in Turkiye		75 parents	Survey	Exploring Parental Attitudes (TALL) Young Children		Mix-method	Google Scholar

12.	SitiZulfa, Et al.	THE USE OF AI AND TECHNOLOGY TOOLS IN DEVELOPING STUDENTS' ENGLISH ACADEMIC WRITING SKILLS	28 August 2023	73 English education students	questionnaires and semi-structured interviews	THE USE OF AI IN STUDENTS' ENGLISH WRITING	The result of technology tools showed the various types used by students in the English academic writing process.	qualitative	Google Scholar
13.	DwiSloriaSuharti	Employing Technology Integration on Teaching EFL Grammar	1 november 2021	109 Participant	Questionnaires and interviews	Employing Technology on Teaching EFL	The findings showed that EFL grammar students positively applied technology in their learning.	quantitative	Google Scholar
14.	MasoudAzadnia	ChatGPT-Assisted Language Learning and Teaching: A Scoping Review of Research on ChatGPT Use in L2 Pedagogy and Education	05/05/2024	28 Articles	Survey	Scoping Review of Research on ChatGPT Use in L2 Pedagogy and Education	The review results also revealed the repercussions of the instruction mainly concerned with ethical and technical concerns	Mixed Methods	Google Scholar

15.	XinyueZuo	Technology-Assisted Reading Instruction for English Language Learners: A Methodological Review	2024,	32 journal articles	thematic analysis, research questions	Technology-Assisted Reading Instruction for English Language	A review of the literature reveals a strong focus on evaluating the efficacy of TARI through summative assessments, but limited attention to learners' literacy practices and interactive engagement in digital contexts	Prisma	Google Scholar
16.	IsryLailaSyathroh	EXPLORING THE POTENTIALS OF TECHNOLOGY INTEGRATION FOR TEACHING LANGUAGE SKILLS: A	3, May 2021	English teachers	Questions	THE POTENTIALS OF TECHNOLOGY INTEGRATION FOR TEACHING LANGUAGE	the findings of this literature review show that technology enables teachers and students to interact communicatively, provides	literature review	Google Scholar

		LITERATURE REVIEW					understandabl e input and output, aids learners in developing thinking skills, makes learning and teaching more student- centered, promotes learners' autonomy and makes them feel more comfortable, and increases learners' willingness to learn a foreign language effectively		
17.	DAIRABI KAMIL	LEARNING ENGLISH AT HOME: EXPLORING INDONESIAN EFL	December 1, 2022	12 students	interviews	LEARNING ENGLISH in INDONESI AN EFL STUDENTS ' ONLINE	The findings showed that the majority of the students had unpleasant experiences in	qualitative	Google Scholar

		STUDENTS' ONLINE LEARNING EXPERIENCES DURING THE COVID-19 PANDEMIC				LEARNING EXPERIENCES	online learning due to internet access problems, lack of interaction, stress and demotivation, and difficulty in understanding the lesson		
18.	Rostanti Toba	The Current Issues of Indonesian EFL Students' Writing Skills: Ability, Problem, and Reason in Writing Comparison and Contrast Essay	2019	52 EFL students	essay writing test, open-ended questionnaire and interview	Ability, Problem, and Reason in Writing Comparison and Contrast Essay	The findings of this study revealed that the Indonesian EFL students' writing ability was good that categorized with the mean score 77.83.	mixed methods	Google Scholar
19.	Bambang Yudi Cahyono*	Technological Tools Used in the EFL Teaching in Indonesia	January 2024	210 female and 210 male students	questionnaire and interview	Technological Tools Used in the EFL	<i>the results of the exploration, it is suggested that EFL teachers consider any</i>	qualitative	Researchgate

							<i>of the technological tools in their classrooms either for practical purposes or research.</i>		
20	Liyan. G. Biju	Systematic Review on the Impact of Technology-Supported Writing Environment for Developing Writing Skills	December 2023	33 articles	Systematic Review	Systematic Review on the Impact of Technology-Supported Writing	This study eventually identifies research gaps and suggests areas for additional analysis.	mixed method	Researchgate

Sumber: researcher, 2024

Analyzing the patterns and trends in the literature, it is evident that there is a growing interest in leveraging TALL for EFL writing instruction. The shift towards digital learning environments, accelerated by the COVID-19 pandemic, has further underscored the relevance of TALL. Many studies highlight the need for teacher training and professional development to maximize the benefits of TALL, suggesting that educators must be proficient in using these tools to effectively integrate them into their teaching practices. There are still a number of holes in the present body of research, despite the encouraging findings. Few research have looked specifically at the difficulties Indonesian EFL students have when utilizing TALL, including contextual and cultural aspects that might affect how they learn. Additionally, while the advantages of TALL are widely established, little is known about its possible disadvantages or restrictions, such as the necessity for a balanced integration of technology with conventional teaching techniques and an excessive dependence on it.

Future investigations ought to concentrate on filling up the gaps that have been found, especially by means of long-term studies and thorough assessments of TALL incorporation in EFL curricula. Examining the experiences of educators and learners can yield important information on the real-world difficulties and achievements associated with the use of TALL. Furthermore, investigating TALL's function in the development of more advanced writing abilities like argumentation and critical thinking can improve our comprehension of its influence on EFL instruction as the necessity for a balanced integration of technology with conventional teaching techniques and an excessive dependence on it.

Future investigations ought to concentrate on filling up the gaps that have been found, especially by means of long-term studies and thorough assessments of TALL incorporation in EFL curricula. Examining the experiences of educators and learners can yield important information on the real-world difficulties and achievements associated with the use of TALL. Furthermore, investigating TALL's function in the development of more advanced writing abilities like argumentation and critical thinking can improve our comprehension of its influence on EFL instruction.

CONCLUSION

In conclusion, this thorough analysis has shed important light on the subject of EFL writing instruction, especially when viewed through the perspective of technology-assisted language learning (TALL). The primary results highlight how TALL helps EFL learners improve their writing abilities. By clarifying how different technology tools might be included into writing education to provide more dynamic, interesting, and successful learning experiences, the study has advanced theory as well as practice. It has also brought attention to how crucial it is to use technology in order to meet the demands of a variety of learners and advance educational practices in EFL settings. Even with these additions, there are still some restrictions on the review procedure. The selection of research and the interpretive character of qualitative data analysis could have led to potential biases.

Furthermore, maintaining the review's comprehensiveness and currentness is challenging given how quickly technology is developing. In order to investigate the long-term effects of TALL on EFL writing abilities, future research should concentrate on longitudinal studies. To guarantee that developments in TALL continue to be in line with educational objectives, more research is required to determine the best technology tools and approaches suited to various learning settings and learner profiles.

1. Practice implications

- a. Integrating EFL Writing Instruction with Technology-Assisted Language Learning (TALL).
 - 1) Employ a Variety of Digital Tools: To improve students' writing abilities and cultural awareness, educators should incorporate a range of digital tools (such as language learning applications, digital narrative tools, and online writing platforms).
 - 2) Promote Group Writing: Conduct cooperative writing exercises by utilizing digital platforms. Peer review and group projects can be facilitated via Google Docs and other collaborative technologies, which helps students engage in deeper cultural exchange and understanding.
 - 3) Include Multimedia Sources: Make use of multimedia tools to give students real-world cultural contexts, such as podcasts, films, and internet articles. In addition to improving students' digital literacy, this method can assist them gain a deeper understanding of the target culture.
 - 4) Assist Teachers with Professional Development: Organize workshops and training sessions to assist teachers in mastering the use of digital technologies and successfully incorporating them into their lesson plans. By doing this, it will be made sure that educators are prepared to help pupils with their digital literacy and cultural awareness.
 - 5) Create Culturally Appropriate Writing Assignments: Provide writing assignments that ask students to use internet technologies to research and reflect on cultural subjects. Examples of this include blog entries, digital narrative assignments, and online debates that motivate students to interact critically with cultural material.

2. Implications for Policy

a. Developing Curricula and Integrating Technology in EFL

- 1) Settings Create Detailed Digital Literacy Frameworks: Lawmakers ought to create and execute digital literacy frameworks that delineate the fundamental digital proficiencies and aptitudes required of English as a foreign language (EFL) learner. Curriculum recommendations at the national and regional levels ought to incorporate these frameworks.
- 2) Encourage Fair Access to Technology: Make certain that every student has access to the gadgets and internet connectivity they require. Community initiatives, government financing, and corporate sector partnerships can all help achieve this.
- 3) Encouragement of Technological Infrastructure: To facilitate the use of digital technologies in EFL instruction, educational institutions should make investments in their technological infrastructure. This entails giving teachers and schools technological help as well as updating technology and software.

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