



Analyzing The Needs of ICT-Integrated English Language Teaching for EFL Learners

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui kebutuhan akan pengajaran bahasa Inggris yang terintegrasi dengan TIK di kalangan siswa sekolah menengah EFL di abad ke-21. Penelitian ini juga mengkaji pentingnya literasi digital dalam memenuhi kebutuhan pendidikan siswa di era digital, konsep lingkungan belajar digital, dan perannya dalam mengembangkan keterampilan literasi digital. Pendekatan metode campuran diterapkan, dengan melibatkan teknik pengumpulan data kualitatif dan kuantitatif dari kuesioner yang diberikan kepada 40 siswa sekolah menengah di Batam, Indonesia. Instrumen yang digunakan meliputi observasi, kuesioner, dan wawancara. Temuan menunjukkan bahwa siswa bersikap positif terhadap penggunaan TIK dalam pembelajaran bahasa Inggris, puas dengan fasilitas TIK, dan bersedia menggunakan teknologi untuk belajar di rumah. Para guru mengakui peran TIK dalam meningkatkan kemampuan bahasa Inggris, namun mereka juga menyatakan kekhawatiran tentang waktu, keterampilan, dan dukungan yang diperlukan. Studi ini menyimpulkan bahwa baik siswa maupun guru siap untuk merangkul teknologi digital dalam pendidikan, menyoroti kebutuhan penting untuk pengembangan profesional bagi para pendidik. Implikasinya menunjukkan bahwa mengintegrasikan TIK ke dalam kurikulum bahasa Inggris dapat mengarah pada hasil yang lebih baik, sementara mengatasi kekhawatiran guru dapat menumbuhkan lingkungan belajar yang lebih mendukung. Secara keseluruhan, penelitian ini menggarisbawahi pentingnya literasi digital dalam pendidikan kontemporer.

ABSTRACT

This study aims to know the need for ICT-integrated English language instruction among EFL high school students in the 21st century. It also examines the importance of digital literacy in meeting the educational requirements of learners in the digital age, the concept of a digital learning environment, and its role in developing digital literacy skills. A mixed-method approach was applied, involving qualitative and quantitative data collection techniques from a questionnaire administered to 40 high school students in Batam, Indonesia. Instruments included observation, questionnaires, and interviews. Findings revealed that students are positive about using ICT in English Language Learning, satisfied with ICT facilities, and willing to use technology for home learning. Teachers acknowledged ICT's role in enhancing English proficiency but expressed concerns about time, skills, and necessary support. The study concludes that both students and teachers are ready to embrace digital technologies in education, highlighting a crucial need for professional development for educators. Implications suggest that integrating ICT into English language curricula can lead to improved outcomes, while addressing teachers' concerns can foster a more supportive learning environment. Overall, this research underscores the importance of digital literacy in contemporary education.

1. INTRODUCTION

Technology has changed education in the 21st century. Since they live in a digital age where technology is crucial, today's students are often called 21st-century learners (Saykili, 2019). Thus, it is necessary to analyse the needs of EFL (English as a Foreign Language) students for ICT-integrated English language instruction to meet their needs and improve their learning experience (Lubis, 2018). The urgency of this research is evident in the rapid evolution of technology and the shifting educational paradigms in the 21st century. As digital natives, today's students have unique educational needs that demand adaptation in EFL instruction. Research by (Sabiri, 2020) highlights the critical necessity for systematic ICT integration in EFL teaching to bridge the gap between traditional methods and the expectations of modern learners.

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Failing to adapt risks diminishing student engagement and educational outcomes, making it essential to understand EFL learners' needs concerning ICT-integrated instruction. Awareness of 21st-century learners' traits is the first and most significant stage in identifying a student's English language education needs. These students are digital natives since they have always used technology (Khan & Kuddus, 2020). They are tech-savvy, versatile, and keen to explore digital resources. As a result, traditional teaching approaches may no longer satisfy their needs. This research presents a novel examination of the intersection of ICT and EFL instruction, focusing specifically on the requirements of 21st-century learners. While existing studies have addressed ICT in education, this research emphasizes the characteristics of digital natives and their unique needs. By investigating the integration of technology and media in language learning, the study aims to provide educators with innovative strategies that enhance EFL instruction, making it more relevant and effective (Ahmadi, 2018; Poudel, 2022).

To meet 21st-century student needs, educators must recognise digital literacy's importance (Tohara, 2021). Digital literacy is the ability to use digital technology, communication tools, and networks to access, manage, integrate, appraise, and produce information effectively, efficiently, and ethically. It goes beyond basic computer literacy to access, evaluate, and use digital information. Digital literacy is the ability to properly examine and explore digital information. Teachers can help students become critical digital content consumers and creators by teaching digital literacy in English (Liu et al., 2020). Successful learning in a mixed-methods environment requires it. Digital literacy in school implies being able to utilize technology, handle information, think critically, and behave appropriately online. Digital literacy requires the ability to read and write on various platforms and formats.

The creation of a Digital Learning Environment (DLE) is also linked to digital literacy (Wrahatnolo, 2018). The acronym "DLE" stands for "digital learning environment," which refers to an ecosystem of digital tools, resources, materials, and technology that support digital learning (List, 2019). The digital component of teaching and learning includes technologies used in face-to-face, hybrid, and online classes. The DLE equips educators to innovate and tailor instruction to each student (Van de & Voogt, 2018). To do this, the DLE hosts course materials, quizzes, files, and debates for online and mixed learning (Chalkiadaki, 2018). Technology can help teachers create a dynamic learning environment that promotes active participation, language acquisition, and learner autonomy.

Technology and media are used to improve learning in Integrated Technology and Media for Learning (Al-Rahmi et al., 2019). Integrating digital tools, resources, and multimedia content into teaching and learning is "integrated technology and media for learning." Technology and media in EFL classroom can offer unique opportunities to boost language acquisition and interest students. Interactive platforms, internet tools, and multimedia assets allow educators to create a dynamic and immersive learning environment for EFL students. Integrated Technology and Media for Learning is vital to today's education system because it allows students access to many digital tools and resources to help them learn more efficiently. One of the most important uses of integrated technology and media for learning is teaching English as a Foreign Language (EFL) (Ahmadi, 2018). ICT in EFL instruction has been shown to improve students' language skills.

Another key idea in modern education is developing instruction and assessing learning for the 21st century. It stresses the importance of creating instruction for 21st-century students and assessing learning in digital methods. This is explained in "ICT in EFL Teaching and Learning: A Systematic Literature Review" by (Sabiri, 2020). It provides a systematic literature review of theories and research methods on ICT integration in EFL teaching and learning. EFL and teacher training are the main ICT integration areas. Student motivation is another important factor in ICT integration. The second one is titled Some Opportunities and Challenges Presented by Information and Communication Technology in English Language Teaching. This article examines the pros and cons of adopting ICTs in English language teaching (ELT) in Nepali schools by (Poudel, 2022). This study included interviews and focus group discussions (FGD). This study interviewed English teachers and students from two schools.

The study found that using ICTs in teaching and learning could help teachers and students access more learning resources, better prepare and deliver lessons, and engage in more collaborative learning activities. However, neither teachers nor students were satisfied with their use of ICTs in English language learning and teaching. Access to ICT tools and expertise were their biggest challenges in integrating ICTs into ELT.

Based on the background information provided, the following research questions can be formulated:

- a. What are the needs of 21st-century EFL learners in terms of ICT-integrated English language teaching?
- b. How can ICT-integrated English language teaching be designed to meet the needs of 21st-century EFL learners?

Literature Review

Definition of ICT

ICT is Information and Communication Technology. Telecommunications technology provides various tools for information dissemination (Supiandi & Lisa, 2018). This encompasses the internet, wireless networks, cell phones, and other communication technologies, but it emphasizes communication. All devices, networking components, applications, and systems assembled by individuals or organizations are ICT (Ratheeswari, 2018). ICT has altered traditional teaching and learning by allowing instructors and trainers to use IT and essential tools to help students become creative producers and users.

(Al-Rahmi et al., 2020), deeply immersed in the Society of Knowledge, a society based on a critical, rational, and reflexive use of global and distributed information in which telematic networks are the most outstanding communication means, believes that one of the biggest challenges to overcome in the 21st century is to enable teachers and students to master technology rather than be enslaved by it. The widespread use of ICT in various scopes of life has changed the way to access all information unlimitedly. ICT also converted traditional teaching and learning into current IT-based learning and modified teachers' attitudes to adapt to new methods, educational concepts, and managerial elements (Kontostavlou & Drigas, 2019). Using ICT as a flexible teaching and learning method also promoted communication through real materials and resources that educators could easily use. Therefore, ICT is a new technological tool that can be utilized by people or organizations to transport all information through communication technology.

ICT Integration in English Language Teaching

Teachers, especially in English-medium schools, are familiar with ICT in language teaching and learning (Majeed, 2018). Technology makes foreign language learning easy, effective, and fun (Bieser & Hilty, 2018). It provides a genuine learning environment and helps students improve listening, reading, speaking, and writing (Xing, 2018). Before computers, audio-visual mediums were utilized to teach language classes. The phonograph, radio, TV, and phone were used (Xing, 2018). In English teaching and learning, ICT may help build second language skills. It gives language learners rich, multidimensional learning environments to connect with native speakers, interact with other learners remotely, and access authentic resources (Ozcan, 2018). Modern communication technology like emails, chats, and discussion boards improves language skills and allows for long-distance interaction.

To promote English learning, integrate ICT into learning. Facilitation involves qualified teachers learning how to integrate ICT into learning. ICT should help pupils study more deeply. Instead than just learning and memorizing, students should research, evaluate, and grasp material. Indonesian English language teachers face challenges from teaching methods, teachers' English language skills, and a lack of authentic resources and opportunities to utilize the target language. Indonesian language instruction is traditionally teacher-centered. Students are often passive and rarely learn. ICT integration could improve Indonesian EFL.

Technology can revolutionize how teachers teach and learn. It may assist them move from teacher-centered to learner-centered teaching, allowing students to participate in learning. Additionally, its rich multimedia features may give a wide range of authentic content and direct communication with native English speakers or English language learners from other countries. English teachers can use media to clarify their lessons. According to (Spielman et al., 2021), there are three types of ICT use: as a media tool or educational tool to supplement the teacher's explanation, as an information source, in which students gather information through ICT with the teacher's guidance, and as a system learning.

2. METHODS

The researchers employed a mixed method for their study, integrating both qualitative and quantitative data collection techniques. Quantitative data was gathered through class observations and questionnaire responses, while qualitative data was collected through interviews with English teachers. This mixed-method approach allowed the researchers to comprehensively understand English language learning and make informed recommendations for improving teaching and learning methodologies based on both types of data.

The study participants included students and English teachers from a public school in Batam, Indonesia, which offers English language courses in accordance with the standards set by the Ministry of Education and Culture. This school focuses on developing science and technology fields tailored to its students' interests, talents, and potential, as indicated in its mission statement. The researchers selected forty (40) students from grade XI for class observations and questionnaire responses, as students at this level are actively studying English subjects.

The study instruments included class observations, questionnaires, and interviews. The researchers collected data in several ways to ensure the information obtained was varied and accurate. Class observations focused on students' behavior, participation, interaction, and engagement during English lessons, with researchers documenting responses to teachers' instructions and levels of participation in classroom activities. This information helped analyze the effectiveness of the teaching techniques employed. Additionally, the questionnaire was distributed via Google Forms to capture students' perceptions and attitudes toward ICT use in English language learning. It comprised thirty-five questions addressing motivation, confidence, and interest in language studies. Analyzing the responses allowed the researchers to identify strengths and weaknesses in the language learning process, ultimately suggesting improvements in teaching methods. Furthermore, face-to-face interviews comprised thirty-five questions covering classroom ICT usage, teaching materials, and assessment methods. The data collected from these instruments helped the researchers identify the current teaching and learning methods' strengths and weaknesses and suggest future improvements.

The data collection process involved several steps. The researchers began by selecting a school for observation and obtaining the necessary permission to conduct their study and discuss relevant agreements. On October 2nd, 2023, they conducted observations in an English class to evaluate the teaching and learning system in place. A blueprint for the questionnaire and interview questions was created, followed by revisions, after which the final questionnaire was distributed to students and teachers. Throughout the process, regular consultations were held to monitor the report's progress, culminating in a comprehensive report based on the observations made.

Data analysis was an essential aspect of the study and involved examining and interpreting the collected data to uncover meaningful patterns and insights. This included gathering data through interviews and questionnaires and organizing it into relevant categories to extract significant information. The research team used a mixed-method approach to analyze the qualitative and quantitative data, applying data reduction techniques to streamline and clarify the findings. The results were presented through descriptive explanations and diagrams, aiding the team in understanding the data and developing future project plans. Ultimately, conclusions were drawn, and recommendations were made based on the identified issues related to technology implementation at the high school in Batam.

3. RESULT AND DISCUSSION

Results

This study has been conducted on integrating technology in education, which has transformed how English is taught and learned. Digital literacy, the creation of a digital learning environment, and the use of integrated technology and media for learning are all crucial components in meeting the needs of 21st-century learners. However, challenges such as access to technology and expertise still need to be addressed to realize the full potential of ICT integration in ELT. To further understand the impact of ICT integration in ELT, a student questionnaire was administered to gather feedback on their experience.

The following table will answer the research questions from the student result questionnaire analyzing the needs of ICT-Integrated English language teaching for EFL learners:

Table 1. Students Questionnaire

No	Question Criteria	Statements	SD	D	N	A	SA	Total
1	Students' Perception towards ICT use in English Language Learning	The use of ICT makes English learning more enjoyable	0	2	9	13	16	40
2		The use of ICT makes understanding English learning material easier	0	2	7	15	16	40
3		The use of ICT makes it easy to find and get English language learning	0	1	5	16	18	40
4		I am satisfied with the ICT facilities provided by the school for the learning	0	5	18	8	9	40
5		I am used to using ICT to learn learning materials at home	3	6	14	11	6	40
6		The use of ICT does not make learning English effective	16	18	9	5	2	40

7		I hope ICT is used more frequently in learning process to help me improve my English language skills	0	1	8	11	20	40
8	Students' Expectation towards ICT use in English Language Learning	Teachers need to use ICT in learning English to students	0	2	10	14	14	40
9		I would like school to provide ICT facilities that can be used for the learning process	0	1	12	15	12	40
10		I don't want to learn English through ICT	16	9	8	5	2	40
11		I use of ICT to share information	3	3	10	14	10	40
12	Use of ICT as a tool for language learning in the classroom	I use of ICT to support teamwork or collaboration	2	5	12	11	10	40
13		I use of technology to keep track of your work on extended tasks or assignments	1	2	19	10	8	40
14		I enjoy using digital devices	0	1	7	20	12	40
15		I am aware of various types of digital devices	0	5	21	10	4	40
16	Self-rating of attitude toward the use of ICT	I understand what digital literacy is	4	8	19	6	3	40
17		I am willing to learn more about digital technologies	0	1	13	18	8	40
18		I think that improving my own digital literacy is important	0	1	9	18	12	40
19		I feel that using ICT based learning would be easy for me	0	2	9	15	14	40
20	Perceived Ease of Use	It would be easy for me to get ICT based learning to do what I want to do	1	2	11	13	13	40
21		I feel that my ability to determine ICT based learning ease of use is limited by my lack of experience	0	3	20	12	5	40
22		I believe it is a good idea to use an ICT based learning in the English Language Teaching course	0	1	7	17	15	40
23	Attitude toward Usage	I like the idea of using ICT based learning in the English Language Teaching course	0	2	9	16	13	40
24		If I have access to ICT based learning, I intend to use it	0	1	8	21	10	40
25	Digital competence in communication and collaboration	I use chats to interact with other people	0	2	22	10	6	40

The results of the students' questionnaire based on the table are that they have a positive attitude towards using Information and Communication Technology (ICT) in English Language Learning, perceiving it as enjoyable, helpful in understanding learning materials, and aiding in the location of language learning resources. They express satisfaction with the ICT facilities provided by the school and a willingness to use ICT for learning materials at home. Additionally, students hope for more frequent use of ICT in the learning process to enhance their English language skills and believe that teachers should incorporate ICT in English language teaching. The use of ICT as a tool for language learning in the classroom is evident, and students exhibit a positive self-rating of their attitude toward using ICT. They feel that ICT-based learning is generally easy to use and can help them achieve their learning goals. Overall, the surveyed students express a positive attitude towards using ICT in English language learning, indicating a readiness to embrace digital technologies for educational purposes.

From the responses of 40 high school students in Batam, the results of this study were also compared with a number of referenced journals, helping in the selection of relevant questionnaire questions. In the first journal, stated by (Al Arif, 2019) studied Indonesian university students' perceptions and expectations of ICT use in learning English as a foreign language. The study found that students spent more time using ICT for general purposes than for English learning purposes, but they perceived that using ICT could improve their English language skills. In the second journal, stated by (Eryansyah et al, 2019) evaluated EFL students' needs for digital literacy to meet the demands of 21st-century skills. The study found that students had a positive attitude towards using ICT in language learning but needed to improve their digital literacy in ICT. Finally, in the third journal, stated by (Wijayati et al, 2021) investigated the effectiveness of using WhatsApp as a digital tool to improve English speaking skills among Indonesian EFL learners. The study found that WhatsApp effectively improved English speaking skills, and learners positively perceived its use.

Subsequently, according to the teacher questionnaire results that researchers get after visiting the schools, the teachers agree that integrating ICT in English language teaching can enhance English proficiency and improve learning outcomes. They also find ICT-based teaching more beneficial than traditional methods. However, there are challenges related to the implementation of ICT, including limited time for integration, the need for more teacher training and technical support, and concerns about its impact on classroom discipline. Overall, the respondents have mixed perceptions about the readiness and development of the CLT curriculum for ICT integration. However, teachers are proficient in using ICT tools to enhance language learning and teaching, and they express a level of awareness regarding the impacts of media on themselves and society.

From the responses of the teachers from high school students in Batam, the results of this study were also compared with a number of referenced journals, helping in the selection of relevant questionnaire questions. In the first journal, stated by (Khan et al, 2020) most English language teachers in Bangladesh have a positive attitude towards the effectiveness of ICT in teaching English to the secondary level learners. However, they face several challenges in implementing ICT in their classrooms, such as poor connectivity, infrastructural problems, inadequate training for teachers, and lack of time for preparing lessons integrating ICT. In the second journal, stated by (Hafifah et al, 2020) there is a significant correlation between teachers' ICT literacy levels with their training experiences, internet frequency usage, and ICT integration in language teaching. The study found that English educators in higher education levels in Indonesia are ICT literate and ready to implement ICT in their instructional setting. However, they still need more training and policy support for stronger ICT integration in education. In the third journal, stated by (Karaeng et al, 2021). The study found that EFL teachers faced several challenges in implementing e-learning, such as technical issues, lack of training, and inadequate support from the institutions and the government. Finally, in the last journal, stated by (Costales, 2019) found that secondary school social studies teachers faced challenges while using and assessing performance tasks. However, teacher-respondents had no difficulty in determining assessment criteria. There was a significant difference in perception among teacher-respondents based on their highest educational attainment towards determining assessment criteria, and age was significant towards utilizing performance tasks.

Discussion

The International Society for Technology in Education (ISTE) published forward-thinking standards for teachers to use technology for student learning, creative thinking, digital age activities and assessments, digital citizenship, and professional growth. Although still relevant, technology has changed significantly in the past decade (Trust, 2018). By aligning with these standards and integrating technology creatively and meaningfully, teachers can help their students develop the digital literacy and 21st-century skills needed to succeed in an increasingly connected digital world (Tican et al, 2019). The constructivist theory of learning emphasizes that learners construct their own understanding and knowledge through experiences and reflections (Agzagee, 2020). This theory aligns with the idea that ICT can revolutionize the teaching and learning of English by facilitating interactive and engaging learning environments. By embracing the ISTE standards and implementing constructivist approaches, teachers can ensure that their students are prepared to thrive in the digital age (Ercag et al, 2022; Starkey, 2019).

Another relevant theory is the social constructivist theory, which builds upon the foundations of constructivism by emphasizing the social contexts of learning. According to this theory, learners gain knowledge through social interactions and collaborative experiences with peers and teachers (Alismaiel et al, 2022). This perspective highlights the importance of dialogue, teamwork, and the sharing of diverse viewpoints in the learning process. By integrating ICT tools that promote collaboration, such as discussion forums and group project platforms, educators can create vibrant learning communities that not only enhance English language acquisition but also prepare students to work effectively in diverse, technology-driven environments (Buragohain et al, 2023).

Despite the challenges of integrating ICT in EFL teaching and learning at the High School in Batam, Indonesia, such as time constraints and the need for teacher training, the previous study mentioned in the background, teacher and student interview results the researchers found its benefits to the learning process, such as increased student motivation and engagement, improved pronunciation, and speaking skills. The student interview result further tells the importance of ICT in enhancing their English proficiency and acquiring other ICT-related skills that will be useful in the 21st century (Tican et al, 2019). The researchers recognize the need for teachers to adapt their teaching approaches to incorporate ICT effectively, especially given the increasing role of technology in society.

The results answer the research question that the researchers mentioned in the background and provides insights into the needs and perceptions of 21st-century EFL learners regarding ICT-integrated English language teaching. The results of the students' questionnaire provide insights into the needs of 21st-century EFL learners in terms of ICT-integrated English language teaching. The researchers found students have a positive attitude towards using ICT in English language learning, and express satisfaction with the ICT facilities provided by the school. They hope for more frequent use of ICT in the learning process to enhance their English language skills, and believe that teachers should incorporate ICT in English language teaching. Moreover, the results of both the students' and teachers' questionnaires provide insights into how ICT-integrated English language teaching can be designed to meet the needs of 21st-century EFL learners. The teacher questionnaire results suggest that there is a need for more teacher training and technical support to overcome challenges related to the implementation of ICT, including limited time for integration and concerns about its impact on classroom discipline. The student questionnaire results suggest that students are willing to use ICT for learning materials at home and hope for more frequent use of ICT in the learning process. Overall, the results suggest that there is a need for more teacher training and technical support to design ICT-integrated English language teaching that meets the needs of 21st-century EFL learners.

By embracing the ISTE standards and incorporating ICT creatively and meaningfully, teachers can help their students develop the digital skills necessary to succeed in the 21st century while making learning more enjoyable and engaging (Cevik, 2019). The findings could be used to design effective ICT-integrated English language teaching programs that cater to learners' needs and expectations while addressing teachers' challenges and concerns. By understanding learners' and teachers' needs and perceptions, ICT-integrated English language teaching can be designed to enhance the effectiveness and efficiency of language learning and teaching.

4. CONCLUSION

To sum up, the integration of ICT in EFL teaching and learning has the potential to revolutionize the way English language is approached, and the results of the student and teacher questionnaires indicate a positive attitude towards using ICT in English language learning. However, challenges related to access to technology and expertise still need to be addressed to realize the full potential of ICT integration in ELT. It is crucial for teachers to adapt their teaching approaches to incorporate ICT effectively, especially given the increasing role of technology in society. By aligning with the ISTE standards and integrating technology creatively and meaningfully, teachers can help their students develop the digital literacy and 21st-century skills needed to succeed in an increasingly connected digital world. To address this, the researchers explained to the teachers on how to integrated ICT in the classroom and created multimedia materials aligned with the syllabus and lesson plan, incorporating group activities and speaking exercises. These materials will be available to students in and outside the classroom to make learning more engaging and increase confidence in using technology. Periodic assessments will evaluate progress and make necessary adjustments. The project aims to enhance the learning experience and develop 21st-century skills.

The implications of the research on integrating ICT in EFL teaching are substantial, suggesting that teachers should adopt innovative, technology-enhanced methods to create engaging and interactive learning environments, ultimately improving student motivation and participation. Ongoing professional development is essential for educators to enhance their digital literacy and pedagogical skills; thus, training programs focused on ICT integration are crucial. Additionally, curriculum developers should work to create multimedia resources that align with learning objectives, addressing the identified challenges of access to technology to promote equity. Regular assessments that evaluate student progress in these tech-enhanced learning activities are necessary, and this integration prepares students for the demands of the digital world by fostering essential 21st-century skills. Ultimately, making ICT resources available both inside and outside the classroom increases student engagement and confidence, which are vital for their academic and professional success.

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