



## A STUDY OF TEACHING DURING THE INDUSTRIAL ERA 4.0: ENGLISH TEACHING OBSTACLES TO THE USE OF ICT IN EFL CLASSROOM CONTEXT

Khoirunnisa Isnani<sup>1</sup>, Neni Desi Fajarwati<sup>2</sup>

<sup>1-2</sup>Universitas Islam An Nur Lampung, Lampung, Indonesia

Email: [khoirunnisa\\_isnani.kn2@gmail.com](mailto:khoirunnisa_isnani.kn2@gmail.com)<sup>1</sup>, [nenidesi91@gmail.com](mailto:nenidesi91@gmail.com)<sup>2</sup>

### Abstract

Technological developments in the Industrial Revolution era 4.0 provide benefits in various aspects including education. Likewise, the advancements in information and communication technology (ICT) have greatly enhanced the innovation of English language teaching and learning, providing new opportunities and methods for teachers to engage students with the language. However, technology also brings some significant challenges that need to be addressed. Therefore, this article investigates the significant challenges teachers face in integrating ICT into their classrooms and highlights the innovative strategies they implement to successfully navigate these obstacles. This qualitative descriptive study involved five English teachers as the research subjects to obtain data using structured interviews. Researchers found that The rapid advancements in technology impacted various aspects, including education aspect. The efficacy of English language acquisition is demonstrably enhanced by advancements in technology. However, the teachers faced some obstacles in integrating ICT into English teaching and learning, including technical constraints, incomplete ICT infrastructure in schools, and teachers' lack expertise in utilizing ICTs in the learning process. In addressing these challenges, teachers have devised various strategies, including comprehensive preparation and inspection of all ICT equipment to be utilized in the learning process, using the personal internet network during the trouble network in the school, and requesting assistance from others who possess greater ICT skills. Consequently, the utilization of ICT can be implemented as mentioned from teachers' perception which the benefits of ICT have been used for English teaching and learning process in Indonesian classroom context.

**Keywords:** ICT, English Teaching Obstacles, ICT use in EFL

### INTRODUCTION

Indonesia is entering a transformative phase known as Industry 4.0, which presents a valuable opportunity for the integration of advanced technologies. This advancement can significantly enhance teaching and learning processes. Further, Coles (2023) said that technology is not just an additional tool to improve traditional teaching methods, it plays a vital role in transforming education during the age of the fourth industrial revolution. Embracing new technologies allows the teachers to create innovative and dynamic learning experiences that not only engage students but also prepare them for the future. Close to integrating these advancements into teaching

processes, the teachers can effectively enhance the ways educating and inspiring learners. Besides, Indonesian government is actively equipping teachers to effectively integrate technology into the teaching and learning process. It can be seen from the Process Standards for Primary and Secondary Education that one of the key principles in this decree emphasizes the use of ICT to enhance both the efficiency and effectiveness of learning (Ministry of Education and Culture, 2016). In the other hand, English as a foreign language is a compulsory subject from junior to university level in Indonesia, which encourages English teachers to incorporate technology as an innovative learning tool. Therefore, Teachers have a crucial role in integrating technology into the learning process, as this not only enriches the educational experience but also empowers students to develop their skills and capabilities.

Technology is closely linked to Information and Communication Technology (ICT). The term "Information and communication technology" (ICT) refers to the hardware, software, networks, and media used to gather, store, process, transmit, and present information such as voice, data, text, and images (Khaerunnisa, Faryanis, Aisy, & Charisma, 2023). In English language teaching and learning context, According to Brown (2001), the introduction of technology in the language classroom began in the 1950s and 1960s with the innovative use of language laboratories, transforming the way languages are taught and learned. Besides, the audio-lingual method emphasizes the importance of language laboratories, specialized environments designed to enhance language learning such as pronunciation drilling and listening to the clear and fluent utterances of native speakers (Madya, 2013). In accordance with Nathania (2024), ICT can be categorized into two essential types that enhance learning experiences. Non-web-based learning includes (1) movies/films, which provide engaging visual content; (2) radio and television, offering informative broadcasts; (3) LCD projectors that facilitate presentations; and (4) language labs that promote interactive learning. On the other hand, web-based learning encompasses (1) websites for fast information access, (2) applications that offer personalized learning experiences, and (3) YouTube, a platform rich in educational videos. Embracing both types of ICT can significantly enrich the educational journey.

Furthermore, ICT provides many advantages in English language teaching and learning. Some previous researchers identify the beneficial of ICT utilization in English teaching and learning process. Poudel (2022) proposed that ICT greatly enhance teaching and learning by providing access to valuable resources, simplifying lesson preparation and presentation, and promoting collaborative experiences. Additionally, ICT enhances the learning experience, such as superior learning outcomes, interesting content, real communication, and efficient time management (Isma, 2023). ICT also encourages

students' learning motivation, making them more active in the learning process (Jamilah, Fatkhurrozi, & Siswoyo, 2024; Azmi, 2017). The example of integrating ICT in English language teaching and learning such as providing YouTube videos of how native speakers pronounced words and displayed with a projector in the classroom then. This activity is able to engage students' leraning intention and also practice their listening skill (Nathania, 2024). In conclusion, ICT offers numerous advantages in teaching English, and teachers are encouraged to integrate ICT into their instruction.

However, Integrating ICT into English teaching poses challenges, particularly in Indonesia. This article explores the obstacles teachers face and the innovative solutions they implement to enhance English instruction through ICT, ultimately aiming for more engaging learning experiences. Consequently, the findings of this research can assist English teachers in addressing their challenges with ICT in learning.

## METHOD

This research utilizes a qualitative descriptive method to explore the challenges faced in integrating information and communication technology (ICT) into the English language teaching process, along with the strategies teachers employ to overcome these obstacles. The researcher conducted structured interviews, posing the same set of detailed questions to all participants to collect the required data. Besides, the researchers interviewed five English teachers from different schools, using a voice recorder to capture the conversations to obtain accurate data. The data collected from these interviews was analyzed through three primary activities: data reduction, data presentation, and drawing conclusions/verification (Miles & Huberman, 1994).

## FINDINGS AND DISCUSSION

### Findings

The interviews conducted by researchers revealed that all participants used ICT in their English teaching processes. The interview data from participants is displayed as follows:

*"Yes, these days, information and communication technology (ICT) is widely used, and it is necessary for us to adopt it."*

The other participant mentioned that:

*"Once, I used it in my class."*

From the responses of the interviewees, it can be concluded that English teachers have utilized ICT to teach English in the classroom.

### 1. Obstacles Faced by Teachers to Use ICT in English Teaching

In the other hand, the subjects mentioned several obstacles in applying ICT during the teaching process in the classroom. The results of the interview are presented as follows:

*"...regarding the system components, including the plug, the audio system, and the screen."*

The other participant mentioned that:

*"The material presents some challenges, particularly the source cannot be located."*

The other participant mentioned that:

*"During that time, the cramped conditions of the classroom building severely impacted our ability to connect and collaborate effectively. The weak signal made it particularly challenging to stay productive. Moreover, when developing engaging materials, it often becomes a struggle to capture interest, especially when some applications are difficult to decipher. We must address these obstacles to enhance our learning experience."*

The other participant mentioned that:

*"... sometimes our internet connection can cause signal issues, which affects participation in quizzes. This means that not everyone can join. Some people may have slow internet speeds, while others might struggle with weak or dead phone batteries. To ensure everyone can take part and enjoy the experience, it's essential to address these challenges."*

The other participant mentioned that:

*"... Sometimes the audio doesn't work, or the sound is low. Although the school provides internet access, but the connection doesn't stable."*

The results of the interview indicate that teachers face several challenges when using Information and Communication Technology (ICT). These challenges include technical issues such as limited internet connectivity, malfunctioning technological tools, and a lack of expertise among teachers in using ICT effectively.

## **2. Strategies implemented by teachers to address challenges in utilizing ICT**

Among the various obstacles faced in teaching English with ICT, the subjects also proposed their own solutions to address them. The answers from the subjects are presented as follows:

*"... to ensure a successful teaching process, it is important to prepare well in advance. Gather and organize all necessary materials and resources for the learning process. Before the class begins, double-check everything, including the power outlets and whether the audio equipment is ready for use."*

The other participant mentioned that:

*"... if we cannot find it, we will use what is in the book and teach it to the students."*

The other participant mentioned that:

*"When facing a new application, I always seek advice from a skilled friend first. If I can't reach anyone, I confidently explore the app myself until I master it or find the answers I need through a quick online search. This proactive approach ensures I gain the skills and knowledge I need effectively."*

The other participant mentioned that:

*"... I plan to use my friend's laptop that has excellent audio, switch classes, or locate a spot with reliable internet, like the teacher's lounge or the library, since the signal in the library is generally stronger."*

The other participant mentioned that:

*"Usually, we take the initiative to gather those whose signals are problematic."*

Based on interviews, it can be concluded that teachers employ various strategies to overcome the challenges they face when using ICT in the classroom. Their solutions include preparing and verifying all necessary materials for teaching, utilizing available learning resources when internet searches prove difficult, sharing internet connections, seeking assistance from others, or researching online to better utilize specific applications.

### **3. The Use of ICT in English Language Teaching in Indonesia Context**

In addition to the challenges encountered by interviewees when using ICT in their teaching, researchers uncovered their opinions on the role of ICT in the educational process in Indonesia. The speakers noted that despite numerous obstacles, the implementation of ICT can be considered highly effective in learning and teaching in Indonesia. The results of the interviews with informants are as follows:

*"I think so, because schools will follow the progress of the industrial revolution 4.0 era, so all schools will prepare their facilities."*

The other participant mentioned that:

*"Regarding the present utilization of technology, it is likely that the potential has been fully realized. Given the current state of technological advancement, it is inevitable that we must incorporate it into our educational practices."*

Another interviewee noted that:

*"The technology has been extensively adopted due to the mandatory requirement for educators to incorporate ICT into their pedagogical approaches. This is in alignment with*

*the curriculum's objective of fostering student critical thinking, rather than relying solely on conventional methods that place the instructor in a more dominant position."*

## **Discussion**

The results of the interview indicate that the respondents possess a fundamental understanding of ICT and have incorporated it into their pedagogical practices. The teachers used various ICT tools such as PowerPoint, projector, video, audio, internet, and learning management system. This finding aligns with the finding researched by Nathania (2024), which mentioned that the integration of web-based and non-web-based ICT can enhance the efficacy of English language instruction in the classroom. This suggests that teachers are familiar with the application of ICT in the current industrial revolution 4.0.

However, the research findings indicate that there are still some obstacles hindering the full implementation of ICT by teachers. These obstacles take various forms, including technical issues such as malfunctions in projectors, audio equipment, or electrical outlets. Additionally, the internet network installed at schools has been cited as a contributing factor. The resource person noted that the internet network occasionally exhibits suboptimal performance, which can impede the effective use of ICT. This assertion is corroborated by the findings of research conducted by Muslem, Yusuf, and Juliana (2018), which revealed deficiencies in ICT facilities in schools and the suboptimal quality of the internet network.

Furthermore, the pedagogues employed by English teachers appear to be deficient in the realm of ICT integration. This result is in line with the findings of Noni, Jefri, and Nasrullah (2017), which demonstrated that English teachers need ICT training due to their inadequate knowledge and training experience in the utilization of ICT. Consequently, the impediments encountered by English teachers in leveraging ICT in English language instruction are attributable to both the ICT infrastructure available in educational institutions and the teachers themselves.

Nevertheless, teachers have devised various strategies to address these challenges. For instance, if a problem arises with the project or audio, teachers will seek assistance from a qualified class. Alternatively, if the issue is related to the website or internet connectivity, they will utilize their personal internet network.

In conclusion, various obstacles arise when applying ICT for English language learning. Despite these challenges, ICT has been maximized according to the informants. According to the respondents, numerous schools have incorporated ICT into English language instruction. The integration of ICT is not merely an obligation for educators, as

it is formally recognized in the curriculum. It is also a viable strategy to capture the interest of learners. The integration of ICT has been found to enhance student enthusiasm. This phenomenon has been personally observed by the speakers. The implementation of ICT has been found to enhance the dynamism of the classroom environment and facilitate the conveyance of learning material. Despite the paucity of adequate facilities in certain areas, researchers posit that there will invariably be a cadre of educators who employ ICT. While certain remote locations may still lack optimal infrastructure, ICT has been extensively adopted in Indonesia, as evidenced by the respondents' reports. Consequently, a significant proportion of English teachers in Indonesia employ ICT in their pedagogical practices.

## CONCLUSION

In the current era of the Industrial Revolution 4.0, the human condition is connected to technological advancement. The rapid advancements in technology impacted various aspects, including education aspect. The efficacy of English language acquisition is demonstrably enhanced by advancements in technology. However, the teachers faced some obstacles in integrating ICT into English teaching and learning, including technical constraints, incomplete ICT infrastructure in schools, and teachers' lack expertise in utilizing ICTs in the learning process. In addressing these challenges, teachers have devised various strategies, including comprehensive preparation and inspection of all ICT equipment to be utilized in the learning process, using the personal internet network during the trouble network in the school, and requesting assistance from others who possess greater ICT skills. Consequently, the utilization of ICT can be implemented as mentioned from teachers' perception which the benefits of ICT have been used for English teaching and learning process in Indonesian classroom context.

## REFERENCES

Azmi, N. (2017). The Benefits of Using ICT in the EFL Classroom: From Perceived Utility to Potential Challenges. *Journal of Educational and Social Research*, 7(1), 111-119. doi:10.5901/jesr.2017.v7n1p111

Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy*. New York: Addison Wesley Longman.

Coles, R. (2023). English Language Teaching in the Era of Industry 4.0: A Literature Review. *International Journal of Advanced Research in Science Communication and Technology*, 3(2), 894-899. doi:10.48175/IJARSCT-12390

Isma, A. (2023). Book Review: Emerging Trends of ICT In Teaching And Learning: ICT In English Language Teaching. *LLT Journal: A Journal on Language and Language Learning*, 26(2), 812-815. doi:10.24071/llt.v26i2.6172

Jamilah, N., Fatkhurrozi, A., & Siswoyo, S. R. (2024). The Influence of Information, Communication, and Technology (ICT) on Students' Learning Motivation in English Language Learning at Higher Education Institutions. *Journal of Linguistics and Social Studies*, 1(2), 63-74. doi:10.52620/jls.v1i2.46

Khaerunnisa, S. S., Faryanis, I., Aisy, A. R., & Charisma, D. (2023). EFL teachers' obstacles towards ICT integration in EFL classroom context. *Indonesian EFL Journal*, 9(1), 63-74. doi:10.25134/ieflj.v9i1.7110

Madya, S. (2013). *Metodologi pengajaran bahasa: Dari era prametode sampai era pascametode*. Yogyakarta: UNY Press.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: Sage Publications.

Muslem, A., Yusuf, Y. Q., & Juliana, R. (2018). Perceptions and barriers to ICT use among English teachers in Indonesia. *Teaching English with Technology*, 3-23.

Nathania, S. (2024). ICT tools for listening and speaking skills in English teaching and learning: Advantages and challenges in digital globalization era. *Journal of Environment and Management*, 5(1), 1-10. doi:10.37304/jem.v5i1.13696

Noni, N., Jefri, R., & Nasrullah. (2017). Teachers' preference toward and needs of ICT use in ELT. *Global Journal of Engineering Education*, 19(1), 88-92.

Poudel, A. P. (2022). Information and Communication Technology in English Language Teaching: Some Opportunities and Challenges. *Journal of Comparative & International Higher Education*, 14(4), 103-116. doi:10.32674/jcihe.v14i4.3874