TEACHERS' BELIEFS ON TECHNOLOGY INTEGRATION IN ENGLISH LANGUAGE TEACHING

Adinda Dwi Putri Maharani[1], Nur Hidayat[2]
Universitas Muhammadiyah Surakarta, Indonesia[1,2]
a320210220@student.ums.ac.id[1], nh249@ums.ac.id[2]

Abstract

This study aimed to investigate teachers' beliefs towards technology integration in English language teaching in the classroom and identify the factors that support and hinder them in using technology in English language teaching. The participants were five English teachers in one of the senior high schools in Central Java, Indonesia. The data was collected through observation and semi-structured interviews. The researchers conducted a thematic analysis to analyze the data. The findings indicated that the interaction between teachers and students plays an essential role in increasing students' participation and enthusiasm during the learning process. Moreover, the teachers' beliefs contributed to affect the teachers' attitudes to technology integration. Easy access to learning materials, communication, and coordination, effective distribution of learning materials, assignments, and questions, evaluating and providing quickly, and making the material more interesting became factors that support the teachers to implement technology in the classroom. Moreover, some of the barriers for teachers to use technology include distraction of students' focus, time constraints, limited technological capabilities, limited school internet facilities, and teachers' beliefs.

Keywords: *English Language Teaching, Teachers' Beliefs, Teaching Strategies, Integration of Technology*

Introduction

The use of technology is not only limited to scientific knowledge that must be applied for practical purposes in human life but also becomes a necessity. The demands of these needs extend to various fields of science, including education. Educational technology is related to high-speed digital technology, teaching machines, and cultural communication capacity that continues to grow every year (Hassan et al., 2023; Ochoa-Tataje et al., 2024; Pirbhai-Jetha et al., 2021; Tennyson & Park, 2013).

Maharani & Hidayat. (2025). Teachers' Beliefs
on Technology Integration in English Language
Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

As a result, technology is often used in the scope of education, especially in the teaching-learning process in the classroom. The growing use of technology in classroom learning imposes skills and competency requirements on teachers to enhance their professionalism and focus on developing their digital capabilities. Therefore, teachers' competence in using technology becomes an essential factor in making the teaching and learning process in the classroom more effective (Ahmad Kusaini et al., 2023; Hidayat, Setiawan, et al., 2023; Zhao, 2024).

In the implementation of technology in learning, teachers' beliefs play an important role in determining how they integrate technology into the classroom. Cheng et al. (2024) highlight that teachers' beliefs affect the technology integration practice in the class. Kim et al., (2013) assert that teachers' pedagogical beliefs and technology integration practices are interrelated, with a particular relationship between teachers' beliefs about the nature of knowledge and learning, effective ways of teaching, and technology integration practices. Those explanations indicated that teachers' beliefs have a strong relationship to technology integration which influences the teaching process.

However, not all teachers have the same beliefs in responding to technology integration in classroom learning. Önalan and Kurt (2020) point out that Teachers' beliefs are influenced by their knowledge of computer software programs, habits of personal computer use, attitudes and confidence in integrating computer-based technology into teaching, and their views on school climate and support. Knowledge of issues related to technology integration in learning can have a significant impact on teachers' beliefs therefore, training for teachers on the use of technology in learning is needed (Wilson, 2023).

Therefore, an in-depth analysis of teachers' beliefs towards technology integration in learning is important. This study examines teachers' beliefs towards the integration of technology in English language teaching as well as the factors that support and hinder its use in the classroom. This study provides an in-depth understanding of teachers' perspectives and the factors that influence the use of technology in English language learning.This research provides insights for

policymakers, curriculum developers, and educators in designing more effective technology-based learning. In addition, this research can serve as a basis for the implementation of training and professional development for teachers to improve their competence in integrating technology optimally in the learning process. The following research questions are how do English teachers' beliefs influence students' instructional practices in the use of technology? And what factors support or hinder the use of technology in English language teaching in the classroom?

In recent years, the integration of technology in English language teaching has grown rapidly. Technology has presented various tools and platforms that make it easier for teachers and students to carry out English learning both inside and outside the classroom such as learning management systems, artificial intelligence-based learning applications, English translation tools, English learning videos online quizzes, and virtual classrooms. Chumpavan et al. (2024), Rintaningrum (2023), and Wang and Winstead (2016) explained that technology integration in language learning can increase students' motivation and participation in language learning. Several studies show that the use of technology in English language teaching can improve students' language skills, increase student engagement, and facilitate interactive learning. (Arifani et al., 2020, 2021; Hidayat, 2022).

In addition, the use of technology in learning promotes interaction and collaboration among students and supports independent learning (Carvalho & Santos, 2021; Jeong, 2022; Muthmainnah et al., 2024). In addition, the use of technology in learning helps teachers to develop Technological Pedagogical Content Knowledge (TPACK) and foster teacher professionalism in pedagogical methods and technological skills (Rezai et al., 2024; Urazbayeva et al., 2024).

Although technology integration in English language teaching provides many benefits, there are some challenges faced in its implementation. Technology integration in learning requires good technology skills from student teachers, adaptation to students' needs, access to adequate technology infrastructure, culture, and teachers' beliefs. (Chaaban & Ellili-Cherif, 2017; Hidayat, Afdholy, et al., 2023; Jannah, 2025; Purwaningrum & Yusuf, 2019; J. Wang, 2024).

Maharani & Hidayat. (2025). Teachers' Beliefs on Technology Integration in English Language Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

Teachers' Beliefs in Technology Integration in EFL play an essential role in the success of technology integration in the class. Several studies underline the importance of their beliefs and their impact on the use of technology in learning. Ding et al. (2019) explained that EFL teachers' pedagogical beliefs about specific content significantly influenced the way they used assistive technology tools. In addition, teachers' beliefs about the benefits, social expectations, and usefulness of technology positively influence the implementation of digital literacy in the classroom (Deiniatur et al., 2024). Liu and Hai (2019) emphasized that teachers' beliefs have a strong correlation with teachers' technological knowledge and their technological beliefs. Teachers who have positive beliefs about integrating technology in learning tend to have better technology beliefs and skills. In contrast, teachers who have negative and skeptical beliefs will tend not to use technology and have lower technology skills.

Several studies explain some of the factors that influence teachers' beliefs in integrating technology into learning. Shin et al. (2014) teachers' attitude toward technology substantially affects its application in practice and can result in changes to their pedagogical beliefs. Antonietti et al. (2022) and Salleh et al. (2021) confirmed that increased self-efficacy correlates with increased intention to utilize technology and strengthens teachers' beliefs. Teachers with high levels of self-efficacy tend to explore new technologies and use them in learning with confidence. Li (2014) and Wang (2024) explained that the broad socio-cultural context, which includes cultural values and customs, can influence educators' ideas and behaviors in utilizing technology. In environments that favor tradition and conventional pedagogical approaches, teachers often show reluctance to use technology, fearing its impact on local values and social dynamics in the classroom. In contrast, in cultures that are more receptive to innovation, teachers show a greater willingness to investigate different technologies to improve teaching effectiveness. In addition, societal norms around teacher authority and the role of technology in education influence the extent to which educators feel comfortable incorporating technology into their teaching methods.

From the explanation above, it shows that teachers' beliefs are one of the important factors that can affect teachers' performance in using technology in English learning (Maulidia, M., & DJ, M. Z., 2023). In addition, several factors such as teachers' attitudes toward technology, teachers' self-efficacy, and sociocultural influence teachers' beliefs about using technology in learning. Given the importance of teachers' beliefs in the application of technology in English language learning, this study investigates how English teachers' beliefs affect student teaching practices in the use of technology and the factors that support and hinder the use of technology in English language learning.

Method

This study uses a qualitative research design that explores teachers' beliefs and classroom practices using technology in English language learning. In this study, the research design focused not only on teachers' beliefs about the use of technology in learning English as one of the lessons that must be mastered by students but also on identifying the factors that support and hinder them from using technology in the teaching-learning process.

The participants in this study were five EFL teachers in one of the senior high schools in central Java, Indonesia who have teaching experience of more than five years. All participants had consented to the research. Before data collection, the participants were fully informed about the purpose of the study and related details. It was agreed that participants' names would be kept confidential, and pseudonyms were used to identify participants. Permission from all participants, both verbal and written, was obtained for ethical considerations. During the data collection process, the participants were given appropriate directions on the topics to be interviewed and provided the best possible information. The research was conducted in an ethical manner, which involved the content of the questionnaire written consent, verbal agreements, and a transparent process of how the data would be analyzed and used for the study. All participants gave their perspectives according to the questions asked by the researcher. About 10 questions about their belief in the implementation of

Maharani & Hidayat. (2025). Teachers' Beliefs on Technology Integration in English Language Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

technology and factors that support and hinder it can be answered based on their experience.

The data collection stage in this study was carried out through two collection techniques: observation and semi-structured interviews. Observations were made by directly observing and recording the situation in the classroom during the English language teaching process. Observation aims to directly observe the learning process in the classroom in a real context. It gives researchers direct access to observe the interaction between teachers and students, how to apply pedagogical methods used by teachers, as well as student responses and participation during the learning process. With observation, researchers can evaluate various aspects of learning, such as examples of the application of teaching strategies, how the teacher manages the classroom, and how the teacher provides a comfortable and conducive atmosphere for learning so that it can attract students' attention to participate in learning. In addition, during the observation, the researcher can record the level of active participation of students, their interest in the material presented, and also the way they interact with the teacher or their friends. This method helped researchers to identify difficulties encountered that were not revealed during the interview process, such as the lack of interesting media for learning, the teaching provided by the teacher being less varied, or limitations on teacher and student interactions.

The semi-structured interview process was conducted face-to-face at school after the classroom observation was completed. The interviews were conducted in stages with the same duration for each subject, which was about 10-20 minutes. The interview was conducted with the English teacher as the main subject. In the interview session, the researcher asked 10 questions to dig deeper into information about the learning system implemented by the teacher, including basic knowledge and skills, philosophy, as well as training in the use of technology.

To analyze the data, the researcher conducted a thematic analysis. Thematic analysis is one of the qualitative finding methods that can identify, analyze, and interpret themes or patterns that arise during data collection. It helped the researchers explore the deep meaning of the data obtained and then categorize the information

Maharani & Hidayat. (2025). Teachers' Beliefs
on Technology Integration in English Language
Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

obtained into related themes, to enable a more structured understanding of the problem under study. Through thematic analysis, the researcher not only reveals hidden patterns in the data but can also provide rich and contextual interpretations, which can often generate new insights into certain issues and problems. It allows researchers to understand more experiences, viewpoints, and findings from participants in a broader context. The researcher conducted a thematic analysis based on Naeem et al. (2023) with six steps: a) transcription, familiarization with the data, and selection of quotations, b) selection of keywords, c) coding, d) theme development, e) conceptualization through interpretation of keywords, codes, and themes and, f) development of a conceptual model.

Results

1. Effect of Teachers' Beliefs on the Technology Integration

During the classroom observation, the researcher noticed how the teacher interacted with students as well as students' participation during the learning process. During the learning process, students were very participative and enthusiastic about the material provided by the teacher during the lesson. In addition, the role of the teacher is very influential on student participation so that students can pay attention to the lesson well during the learning process, this is due to the teacher's relaxed factor so that students can understand the material well and not seem monotonous when teaching. In addition, on the sidelines of the learning process, the teacher gives directions to students to repeat the explanation of the material provided the way students are asked to re-explain material that has been given by the teacher to train students' thinking and remembering skills with the aim of whether students pay attention properly when delivering material, other methods are also used by teachers as a learning strategy by giving individual assignments where the assignment is not in writing but orally, students come forward and appear in front to get the value of the assignment to train the self-confidence of each student.

Another thing obtained from the results of the observation is that teachers only use laptops, computers, and smartphone technology as tools to facilitate teachers in

Maharani & Hidayat. (2025). Teachers' Beliefs
on Technology Integration in English Language
Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

providing material to students in the form of soft files through Whatsapp groups. Other technologies identified in this study are teachers utilizing several media such as animated videos and the use of online quizzes when learning English. Some teachers are also seen using some English learning websites such as the British Council and BBC Learning English. However, out of the five teachers, only two teachers use technology more often than the others. They used technology more often because they believed that the use of technology in the class assisted them in delivering the learning materials. Moreover, they feel the benefits of using technology in English language teaching both for themselves and for students such as making it easier for them to access and deliver learning materials to students, time efficiency, and increasing student engagement and enthusiasm. When the researcher compared the situation in the classroom taught by using technology with a more frequent and infrequent duration, differences were found especially in student involvement and enthusiasm in following the learning. Classes that more often integrate technology in learning have a higher level of student involvement and enthusiasm compared to those that do not.

The school has held several trainings on the use of technology in learning which were attended by teachers. However, teachers who actually implement the results of the training are still limited. This may be due to teachers' limited ability to operate technology, which makes them less confident in using technology. In addition, teachers' comfort in applying conventional learning in the long run and the complexity of technology also contribute to creating this condition.

2. Factors Support the Use of Technology in ELT in the Classroom

"Technology makes it easier for me to access English learning materials and share them with students quickly." (G1)

"Technology makes it easier for me to distribute learning materials, questions, and assignments directly and efficiently. The use of applications such as Quizizz and Kahoot makes the display of assignments and questions more interesting for students. (G2)

Maharani & Hidayat. (2025). Teachers' Beliefs on Technology Integration in English Language Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

" Technology helps me to assess and provide feedback more efficiently and quickly on students' assignments, so they can know & improve their work faster." (G3)

" Technology makes it easier for me to get the information needed by students in English language teaching when learning takes place considering that English is not our native language."(G4)

"Technology makes it easier for me to communicate and coordinate with students about the implementation of learning. In addition, technology helps me to deliver learning materials in various forms such as PowerPoint and animated videos." (G5)

Based on the interviews with the teachers, several factors supported them in integrating technology into classroom learning such as making it easier for them to access learning materials, distributing learning materials, assignments, and questions efficiently, and making assignments more interesting with Quizizz and Kahoot applications. Moreover, technology helps teachers evaluate and give feedback on students' assignments and quickly get information needed by students during the learning process. In addition, technology made it easier for teachers to communicate and coordinate with students and assisted teachers provide learning materials in a variety of forms.

3. Factors Hinder the Use of Technology in ELT in the Classroom

"I think the use of technology in the classroom sometimes disrupts students' focus. Often they are more interested in the display than the learning material. That makes me reduce the intensity of using technology in classroom learning." (G1)

"The process of preparing learning materials that use videos and the use of technology in learning takes more time." (G2)

"I don't feel confident in using technology because of my limited knowledge of various technological devices. I am worried that if a technical problem occurs in class, I will not be able to solve it quickly, thus hampering the smooth learning process." (G3)

Maharani & Hidayat. (2025). Teachers' Beliefs
on Technology Integration in English Language
Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

"The obstacle in using technology in learning English in the classroom is the unmet technological facilities from the school. The availability of fast and strong internet is needed for the smooth implementation of technology in English learning." (G4)

" for me, technology is not the main thing in learning. I believe that more effective English learning is done through conventional methods such as in-class discussions or live speaking practice. " (G5)

Based on the results of the interviews, several factors hinder teachers from using technology in English language teaching in the classroom, including students' focus disorder, time constraints, technological competence, limited internet facilities owned by the school, and teacher's belief. Teachers feel that the use of technology in learning can make students not focus on the lesson but are more interested in the display or other facilities in it, thus reducing student concentration. The factor of time constraints also causes teachers to rarely use technology considering that it takes more time to prepare learning materials that involve technology. Besides, Teachers' technological competence and limited internet facilities at school add to teachers' hesitation in using technology in learning. In addition, teachers' belief in the ineffectiveness of technology-enhanced learning also contributes to inhibiting the use of technology in classroom learning.

Discussion

The first findings show that the interaction between teachers and students plays an important role in increasing students' participation and enthusiasm during the learning process. Teachers who have a relaxed teaching style are able to create an atmosphere that is not monotonous so that it can help students understand the material well. In addition, learning strategies such as asking students to re-explain the material and giving assignments also contribute to increasing student engagement. In the use of technology, teachers utilize devices such as laptops, computers, and smartphones to support learning. Petrík and Vašašová (2022) and States et al., 2023) point out that a relaxed pedagogical approach fosters a conducive classroom environment, essential for student involvement and comprehension. Chen et al.

(2019) and Man et al. (2021) report that re-explaining and reflecting on the material, even if students don't enjoy the extra effort at first, can increase student engagement in classroom learning.

The use of media such as animated videos, online quizzes, and the utilization of English learning websites such as the British Council and BBC Learning English also increase students' enthusiasm for learning (Muallim, M. et al, 2024) . However, there are differences in the intensity of the use of technology in the classroom by teachers that have an impact on student engagement and enthusiasm in the English learning process. The teachers who believe that technology brings positive effects on the teaching-learning process in the classroom use technology more often than the others (Maulidia, M., & DJ, M. Z. (2023). Classes that frequently use technology tend to show higher levels of participation and enthusiasm compared to classes that rarely use it.

Those findings align with previous studies which have shown that teachers' beliefs about how they adopt technology are highly influential for teaching sustainability (Deiniatur et al., 2024; Ding et al., 2019). Liu and Hai (2019) highlighted that educators' convictions are significantly related to their technological expertise and ideas. Findings by Huang and Teo (2021) and Liu and Hai (2019) found that any teachers who have positive beliefs towards the use of technology are more likely to realize it in their curriculum and English teachers' behavioral intentions. On the contrary, teachers who still feel reluctant to use technology because they feel it is not relevant to English language teaching will tend to avoid using it. It proves that teachers' understanding and beliefs are essential aspects of teaching using technology and determine how they implement the technology in the classroom.

The second findings report several factors that support teachers to incorporate technology into classroom learning such as easy access to learning materials, communication and coordination, effective distribution of learning materials, assignments, and questions, evaluating and providing quickly, and making the material more interesting. This study also highlights some of the barriers for teachers to use technology in English language teaching in the classroom including distraction

Maharani & Hidayat. (2025). Teachers' Beliefs on Technology Integration in English Language Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

of students' focus, time constraints, limited technological capabilities, limited school internet facilities, and teachers' beliefs.

Those findings support the previous studies of Sinatra et al. (2017) and Thapa et al. (2024) studies, teachers' positive attitudes toward technology and their belief that it is beneficial significantly influence their willingness to incorporate it into their teaching practices. Li et al. (2019), Salleh et al. (2021), and Wilson (2023) assert that teachers' beliefs determine teachers' attitudes and perceptions towards the use of technology in learning.

Conclusion

This study provides an in-depth picture of teachers' beliefs about the practical use of technology in the classroom in English language teaching. The findings report that the interaction between teachers and students plays an essential role in increasing students' participation and enthusiasm during the learning process. The teachers also use several strategies during the teaching-learning process in the classroom. However, only two teachers integrated technology into their classes. It is caused by the teachers' beliefs on technology integration in the class. This study also describes that easy access to learning materials, communication and coordination, effective distribution of learning materials, assignments, and questions, evaluating and providing quickly and making the material more interesting become factors that support the teachers to implement technology in the classroom. Moreover, this study highlights some of the barriers for teachers to use technology including distraction of students' focus, time constraints, limited technological capabilities, limited school internet facilities, and teachers' beliefs.

To address the challenges identified, schools and the government need to take some strategic steps. Schools need to improve their technology infrastructure especially the availability of adequate internet to be accessed by most students and teachers in schools. The government can provide support through funding and policies that encourage technology integration in learning such as mandatory training for teachers and incentives for schools that can integrate technology in learning effectively. In addition, mentoring and teacher learning communities can be a solution

Maharani & Hidayat. (2025). Teachers' Beliefs
on Technology Integration in English Language
Teaching

Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

to improve teachers' technology skills and share experiences and strategies in implementing technology in learning in the classroom. In addition, schools can adopt blended learning that allows flexible use of technology without reducing the intensity of teacher-student interaction so that barriers such as time constraints can be minimized.

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Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
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Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

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Inspiring: English Education Journal
Vol. 8 No. 1 (March 2025) pp. 32-48
ISSN 2721-2130

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