EFL TEACHERS' SELF-EFFICACY TOWARD THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE CLASSROOM

THESIS

Submitted in Partial Fulfillment of Requirement
for the Degree of Bachelor of Education
in English Language Education Department

Organized by:

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EDUCATION AND TEACHER TRAINING FACULTY
UNIVERSITAS ISLAM NEGERI WALISONGO
SEMARANG
2025

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**"EFL TEACHERS' SELF-EFFICACY TOWARD THE USE OF INFORMATION
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Assalamu'alaikum, wr.wb.
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RATIFICATION

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Title : EFL Teachers' Self-efficacy Toward the Use of Information and Communication Technology in The Classroom

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Semarang, 17 June 2025

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ABSTRACT

Title	**: EFL TEACHERS' SELF-EFFICACY TOWARD THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE CLASSROOM**
Writer	**: Salma Muhimmatun Nisa**
Student Number	**: 2103046108**

The present study investigates the self-efficacy of EFL teachers with regard to integrating Information and Communication Technology (ICT) into classroom instruction, as well as the challenges they face in this regard. A qualitative case study approach was used in order to collect the necessary data at SD Islam Al-Azhar 25 Semarang. This involved conducting observations and interviews with two members of six English teachers. The findings indicate that factors such as digital competence, instructional strategies, classroom management, and institutional support significantly influence teachers' ICT self-efficacy. Teachers who exhibited higher levels of self-efficacy employed a variety of digital tools and demonstrated a high degree of flexibility in engaging students. The challenges that have been identified include, but are not limited to, unstable infrastructure, a lack of student readiness, time constraints, and limited resources. Not with standing this challenge, the teaching staff demonstrated notable adaptability and a strong commitment to ongoing professional development. The study emphasises the necessity for continuous ICT training, enhanced infrastructure, and targeted support to optimise effective ICT integration in EFL teaching.

Keywords: *EFL teacher, ICT, Self-efficacy*

ACKNOWLEDGEMENT AND DEDICATION
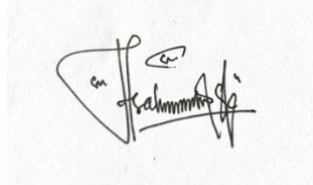
بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ

Praise be to Allah SWT, the Most Compassionate and Merciful, for His guidance and good health during this thesis process. Shalawat and greetings are also extended to the Prophet Muhammad (peace be upon him) who has guided us to enlightenment and truth. The researcher would like to express her deepest gratitude to those who have provided guidance, correction, advice, counsel, and unceasing support to complete this thesis, especially the prayers of my parents and family. I dedicate this thesis to all those who have supported me in the completion of this thesis:

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2. The Dean of Education and Teacher Training Faculty, Prof. Dr. Fatah Syukur, M. Ag.
3. The Head of English Department Universitas Islam Negeri Walisongo Semarang, Dra. Nuna Mustikawati Dewi, M.Pd.
4. The secretary of English Department Universitas Islam Negeri Walisongo Semarang, Lulut Widyaningrum, M.Pd.
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Semarang, 20th April 2025

The researcher,

<ins>Salma Muhimmatun Nisa</ins>

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MOTTO

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اَلَآ اِنَّ نَصْرَ اللهِ قَرِيْبٌ

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"Indeed, Allah's help is always near" (QS. Al-Baqarah: 214)

"When life gets you down, you know what you gotta do?

Just keep swimming!"

(Dory – Finding Nemo)

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CHAPTER I

INTRODUCTION

A. Background of The Study

Information and communication technology (ICT) has changed education in the 21st century, especially in classes teaching English as a foreign language (EFL). The use of ICT improves instructional strategies and involves students in meaningful learning activities (Hubbard, 2009). However, teachers' self-efficacy and their confidence in their capacity to use these technologies effectively in the classroom is a major determinant of how well ICT integration works (Bandura, 1997). Classroom management, student engagement, and instructional behaviors are all greatly impacted by teachers' self-efficacy (Tschannen-Moran & Hoy, 2001). A key factor in determining teachers' teaching strategies and their preparedness to use new technologies in their future classrooms is ICT self-efficacy, which is the belief in one's own capacity to use ICT tools (Saienko et al., 2020). This quality affects their immediate teaching methods as well as their overall professional flexibility in an educational environment that is rapidly growing more digital.

Recent research has demonstrated how ICT can revolutionize education, especially when it comes to improving language learning. ICT supports interactive learning, makes authentic materials more accessible, and meets the needs of a wide range of students (Harrell, Shonta; Bynum, 2018). Despite these advantages, many EFL teachers encounter major obstacles that make it difficult for them to successfully incorporate ICT, such as a lack of resources, a lack of training, and resistance to change (Amhag et al., 2019). These difficulties are even worse in situations where there is a lack of digital infrastructure and literacy (Kaden, 2020). A variety of variables, such as emotional states, social persuasion, vicarious learning, and mastery experiences, affect self-efficacy (Bandura, 1997). Professional development programs, opportunities for collaborative learning, and practical experiences with ICT technologies can all influence these aspects for EFL teachers. When incorporating technology into teaching techniques, higher levels of self-efficacy have been associated with increased adaptability, creativity, and resilience.

Teachers around the world had to adjust to online and hybrid teaching approaches during the COVID-19 epidemic, which further highlighted the vital role that ICT plays in

education. In addition to speeding up the adoption of digital technologies, this change identified differences in teacher ICT proficiency and confidence (Bao, 2020). Higher self-efficacy teachers were more adaptable and creative in their use of technology to enhance student learning, making them better able to handle these difficulties (Ertmer et al., 2024a). A key component in the successful integration of ICT in classrooms is teachers' self-efficacy, which affects their drive, self-assurance, and perseverance in using technology-enhanced teaching methods. Higher self-efficacy teachers are able to experiment with innovative ICT-based teaching strategies, according to research, which improves student engagement and results (Zhou et al., 2021). On the other hand, teachers who have low levels of self-confidence frequently show resistance to adopting ICT, mostly because they are anxious, inexperienced, or think the technology is complicated (Henderson & Corry, 2021)

Another vital aspect is the availability of professional development opportunities tailored to enhance ICT competencies. Training programs focusing on integrating technology with pedagogy have shown a positive impact on teachers' self-efficacy, fostering their ability to address diverse learner needs effectively (Seufert et al., 2021).

However, many teachers still face challenges such as inadequate access to resources, time constraints, and insufficient administrative support, which hinder their confidence in using ICT effectively (Ramafi, 2022)). ICT integration in EFL has brought about revolutionary teaching methods that accommodate a variety of linguistic demands and provide interactive learning experiences (Çelik et al., 2021). Self-efficacy for EFL teachers includes both the capacity to match ICT tools with language-learning goals and the confidence to use technology. A strong grasp of Technological Pedagogical subject Knowledge (TPACK), which combines technology, pedagogy, and content knowledge, is necessary for effective ICT use (Suet Yet & Binti Noordin, 2017).

Although previous studies have highlighted the benefits of ICT use in education in general. However, few have explored specifically how different factors, such as practical experience, social persuasion, or professional training, influence EFL teachers' self-efficacy in the context of ICT use in the classroom. In addition, some studies highlight general challenges such as lack of training and digital infrastructure. However, in-depth studies on specific barriers experienced by EFL teachers, such as limited pedagogical

skills in integrating technology with language learning objectives, are scarce. Thus, this study will fill the gap by identifying factors that influence EFL teachers' self-efficacy, understanding the specific challenges they face, and providing recommendations for improving relevant ICT competencies in English language teaching.

The purpose of this study is to investigate contextual challenges that EFL teachers encounter when integrating ICT with language learning objectives and to determine the factors that impact their self-efficacy in using ICT in the classroom. The results of this study, which emphasize the value of hands-on ICT training, may provide helpful insights into the development of teacher education programs. It is expected that the study would significantly advance the body of knowledge on the development of self-efficacy and the use of ICT in English language learning, especially as education evolves toward digitalization.

A. Research Questions

Based on the background above, the researcher formulates the research questions as follows:

1. What factors influence EFL teachers' self-efficacy in using ICT during learning activities in the classroom?
2. What challenges do EFL teachers face in using ICT during learning activities in the classroom?

B. Research Objective

Based on the research questions above, the objectives of this research are as follows:

1. To identify the factors that influence EFL teachers' self-efficacy in using ICT in the classroom
2. To identify the challenges faced by EFL teachers in using ICT in the classroom.

C. Research Significance

1. Theoretical

   a) To extend Bandura's self-efficacy theory with knowledge of the variables affecting EFL teachers' self-efficacy in using ICT through Tschannen-Moran & Hoy's Teacher Sense of Efficacy Scale.

b) To address research gaps about obstacles to ICT integration with educational objectives in EFL classes

2. Practical

a) To provide guidance for the development of teacher training programs that prioritize practical ICT use and pedagogical integration.
b) To provide policymakers with information to enhance digital support systems and infrastructure.
c) To give teachers resources to improve their self-confidence, creativeness, and adaptability when utilizing ICT.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Previous Research

In educational research, there has been a lot of interest in the study of teachers' self-efficacy beliefs when it comes to using information and communication technology (ICT), especially among EFL teachers. According to Bandura (1997), self-efficacy is the belief that one can actually carry out tasks and affect results. This idea is now essential to comprehending how ICT might be used in the classroom, particularly in settings that encourage technology-enhanced learning. The success of ICT integration is greatly influenced by teachers' self-efficacy; teachers who are confident in their abilities tend to be more creative and flexible when incorporating technology into their lesson plans (Caner & Aydin, 2021). According to their research, teachers who felt more confident in their ICT skills were more inclined to try out a variety of technology tools, fostering student engagement and enhancing learning outcomes.

However, the relationship between self-efficacy and ICT integration is influenced by external factors, including environmental and social contexts. (Clipa et al., 2023)

emphasized the significance of contextual barriers such as resource limitations, lack of professional development, and access to technology that can diminish the efficacy of ICT integration despite high self-efficacy levels. In this regard, teachers' attitudes towards ICT integration were found to be positively correlated with their self-efficacy, but these attitudes were also shaped by external factors like institutional support and access to resources. Interestingly, the study indicated that improving teachers' attitudes toward ICT was just as important as enhancing their technical competencies for successful ICT adoption.

According to (Annury, 2015) the impact of media on children is inherently dualistic, contingent upon the manner in which it is utilized and the extent of guidance provided by adults. When approached thoughtfully, media can serve as a powerful educational and developmental tool; however, in the absence of proper oversight, it may expose children to content that is inappropriate or cognitively overwhelming. Consequently, the active involvement of parents and teachers becomes indispensable in mediating children's engagement with digital platforms. This study underscores the imperative that children should not be left to independently navigate the immense and often unfiltered influence of information

characteristic of modern media landscapes. Instead, they require sustained adult supervision and intentional scaffolding to ensure that their media experiences are not only safe but also enriching, fostering both cognitive growth and socio-emotional development.

The study by (Kundu et al., 2021) discovered that infrastructure and self-efficacy were important indicators of teachers' ICT proficiency, with self-efficacy having a stronger influence. ICT proficiency was influenced by both factors combined, but self-efficacy was found to be the more powerful predictor. These results are consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT), which extends the model by emphasizing two more elements: the behavioral goals of users and the supporting environment. The findings highlight the necessity of improving infrastructural support and teacher confidence in order to effectively integrate ICT into the classroom.

Additional research examined the variables that affect teachers' ICT self-efficacy, including teaching experience, professional training, and educational achievement (Şimşek & Sarsar, 2019). While some studies predicted that young teachers would integrate ICT more fully, others, like (Ghazali et al., 2024), discovered that urban teachers had

higher levels of self-efficacy than their rural counterparts. This was probably because urban teachers had easier access to resources and professional support networks. Birisci and Kul (2019) also demonstrated that teachers with high techno-pedagogical competence, i.e., the ability to integrate technology effectively with pedagogy showed increased confidence in using ICT in their teaching practices.

However, despite teachers' high levels of self-efficacy, (Arhin et al., 2022) found no significant relationship between self-efficacy and attitudes toward ICT integration, indicating that confidence in one's ability to use technology does not always translate into a positive view of its application in learning environments. The study also found that teachers' attitudes about ICT varied according to their gender, indicating that gender has an impact on how technology is viewed and used in the classroom. These results highlight the intricate relationships between ICT integration and the various elements influencing teachers' attitudes toward technology and sense of self-efficacy.

In conclusion, the successful integration of ICT in education is greatly influenced by teachers' self-efficacy, as confident teachers are more likely to employ technology in innovative ways to improve student learning (Caner &

Aydin, 2021). However, self-efficacy and attitudes toward ICT can be strongly influenced by external factors such as professional growth, institutional support, and the availability of resources (Clipa et al., 2023). Research also shows that ICT integration is influenced by teaching experience, training, and location; urban instructors tend to have more self-efficacy because they have access to better resources (Ghazali et al., 2024). This link is further complicated by gender disparities in views regarding the use of ICT (Arhin et al., 2022). Therefore, encouraging positive attitudes and enhancing teachers' ICT competencies require focused professional development and assistance.

B. Literature Review

1. Self-efficacy

Self-efficacy is a fundamental idea in educational psychology that Bandura (1997) created, refers to people's confidence in their capacity to complete task efficiently. (Tschannen-Moran & Hoy, 2001) developed the Teachers' Sense of Efficacy Scale (TSES) in 2001 to assess their beliefs about their ability to impact student engagement, instructional tactics, and classroom management. The Teacher Sense of Efficacy Scale is a reliable and adaptable

tool for analyzing teachers' efficacy about their professional abilities.

Based on (Bandura's 1999) social cognitive theory, the scale first established a three-factor structure that corresponded to major dimensions of teaching efficacy: student engagement, instructional strategies, and classroom management.

a) Student Engagement

This aspect indicates how confident a teacher is in their capacity to engage students in classroom activities. It means motivating students and maintaining their enthusiasm for the subject matter. An important factor in educational results is the complex concept of student engagement. Students' academic success and general learning experience are influenced by a number of factors, including:

1) Behavioral Engagement

Students' participation and involvement in academic activities is referred to as behavioral engagement. Attendance, involvement in class, and assignment completion are examples of these characteristics. This element is frequently associated with successful

academic performance and is thought to be an indicator of a student's commitment to their studies (Quin, 2017).

2) Emotional Engagement

Students' affective responses to their learning environment, such as feelings of interest, boredom, or anxiety, are a component of emotional engagement. Although it has traditionally been seen as a fundamental element of engagement, new research indicates that its significance may need to be reexamined because it does not necessarily predict academic achievement on its own (Reeve et al., 2020).

3) Cognitive Engagement

The commitment to learning and the readiness to put in the effort required to understand difficult concepts and acquire challenging abilities are characteristics of cognitive engagement. It includes self-control and the use of deep learning techniques, both of which are essential for academic success (Payne, 2019).

4) Agentic Engagement

Agentic engagement is a newer component that emphasizes the proactive role of students in their learning process. It involves students expressing their preferences, asking questions, and contributing to the learning environment. This component has been shown to explain unique variance in academic outcomes, highlighting its importance in the engagement construct (Giang et al., 2022).

5) Participatory Engagement

Students who actively participate in both in-class and outside activities are said to be engaging in participatory engagement, also known as physical engagement. This element emphasizes how crucial it is for students to participate in a wider variety of learning opportunities outside of the conventional classroom (Giang et al., 2022).

b) Instructional Strategies

This aspect centers on a teacher's confidence in applying a variety of instructional strategies to successfully convey material and promote learning. It involves altering instructional strategies to accommodate a variety of student

needs and using assessments to guide instruction. Here are the five instructional strategy aspects according to Tschannen-Moran and Hoy (2001):

1) Strategy Selection

    Selecting appropriate learning strategies to achieve goals. This aspect includes: Identifying learning objectives, analyzing student characteristics, selecting appropriate strategies (e.g., discussions, presentations, projects), Adapting strategies to student needs, and Combining strategies for optimal results.

2) Content Organization

    Organizing subject matter logically and systematically. This aspect includes: Organizing the structure of the material, connecting the material to students' experiences, using examples and illustrations, developing conceptual frameworks, and organizing the order of the material.

3) Research Utilization

    Using effective media and resources to support learning. This aspect includes: Using technology (e.g., LMS, learning apps), using additional resources (e.g.,

books, videos), integrating media with materials, using relevant and accurate resources, and timing media use.

4) Classroom management

Manage the class effectively to create a conducive learning environment. This aspect includes: Creating a safe and comfortable environment, organizing the classroom layout, managing time effectively, developing classroom rules, using discipline strategies.

5) Monitoring and Evaluation

Monitor and evaluate the learning process to ensure the achievement of objectives. This aspect includes: Monitoring student progress, evaluating the effectiveness of strategies, using feedback for improvement, setting assessment standards, and developing improvement plans.

c) Classroom Management

This aspect focuses on a teacher's capacity to manage classroom conduct and establish a supportive learning atmosphere. It involves setting clear guidelines, maintaining discipline, and skillfully managing classroom dynamics.

According to (Tschannen-Moran & Hoy, 2001), classroom management consists of four main aspects:

1) Environmental Organization

    Establishing a controlled and supportive learning environment. This element could involve setting up the classroom's design, utilizing technology, and establishing a comfortable and safe atmosphere.

2) Time Management

    Organizing lesson plans, making effective use of time, and avoiding distractions while learning are all components of time management, or efficiently managing time to accomplish learning objectives.

3) Behavior Management

    Developing classroom rules, employing discipline techniques, and helping students become more self-aware are all parts of behavior management, which is the process of controlling student conduct to foster a healthy learning environment.

4) Interaction management

    Interaction management is the process of controlling how teachers, students, and subject matter interact. It

involves employing a variety of learning methodologies, building relationships between teachers and students, and communicating effectively.

2. **ICT in English Language Teaching**

ICT has become essential to language instruction, particularly in EFL settings, because it accommodates a variety of linguistic demands, encourages interactive learning, and offers real resources (Hubbard, 2009). ICT is closely related to TPACK, according to Koehler, M. J., & Mishra, P. (2009) TPACK is an emergent form of knowledge that goes beyond all three "core" components (content, pedagogy, and technology). Technological pedagogical content knowledge is an understanding that emerges from interactions among content, pedagogy, and technology knowledge. Underlying truly meaningful and deeply skilled teaching with technology, TPACK is different from individual knowledge of all three concepts.

The following is an explanation of the three core components:

a. Content Knowledge

Knowledge of the subject matter to be taught. Teachers must have a deep understanding of the subject

matter, including related concepts, theories, and principles (Mishra & Koehler, 2006).

b. Pedagogical Knowledge

Knowledge of effective teaching methods and strategies. Teachers must understand how to teach well, including planning, implementing, and evaluating the learning process (Shulman, 1987).

c. Technological Knowledge

Knowledge of the technology to be used in the learning process. Teachers must understand how to use technology, including software, hardware, and networks (Koehler & Mishra, 2009).

Research shows that ICT gives EFL teachers access to a wide range of teaching resources and multimedia assets that can improve language acquisition. To replicate real-world language use, EFL teachers who are comfortable with ICT prefer to employ digital resources more imaginatively and integrate authentic content (Sun, 2014). An excellent EFL teacher is not limited to a single approach since ICTs have altered the pace of instructional tactics to fit the objectives of their materials and the demands of their students. However, ICTs have provided students with numerous opportunities to practice their English both inside and outside of the

classroom. Due to contemporary technologies, people have the time and flexibility to comprehend, contemplate, and evaluate the information they have been exposed to (Jayanthi et al., 2016).

3. **Teachers' Self-Efficacy in Using ICT in Classroom**

Self-efficacy is the concept that an individual believes they can regulate their own motivation, behavior, and social environment, as well as that they can carry out effective activities. The "assessment of their ability" to engage students in learning, even if they are challenging or uninspired, is what self-efficacy means to teachers. It is a factor that is related to efficiency in terms of effort and the implications of instructional activities (Clipa et al., 2023). There is a big difference between using ICT for educational purposes and being trusting in its use. According to this data, self-efficacy in one's own ICT abilities is insufficient for usage with effective ICT skills in education; rather, it needs to be paired with a favorable attitude toward the use of ICT in educational applications to train others.

Teachers who have high levels of self-efficacy also have high levels of self-development when it comes to using ICT. One could conclude that teachers have a positive perspective on their own ICT-related self-improvement and a strong

belief concerning their own ICT-related self-efficacy. Teachers' readiness to grow as ICT users and their thoughts on integrating digital into classrooms and learning settings were shown to be particularly important (Coban & Atasoy, 2019). Research (Knezek & Christensen, 2002) has indicated that a critical element in the successful implementation of ICT in the classroom is the proficiency of teachers in the subject. Digital competencies, which come into the following categories: problem-solving, communication and teamwork, information and data literacy, and digital content production, are positively connected with this self-efficacy.

The following is an explanation of the four digital competencies:

a. Problem-Solving

What is meant by problem-solving here can include aspects including: identifying and analyzing problems, developing creative solutions, testing and evaluating solutions, using technology to solve problems, and thinking critically and logically.

b. Communication and Teamwork

What is meant by communication and teamwork here can include the following aspects: communicating effectively through digital media,

using technology for collaboration, developing teamwork skills, building relationships with stakeholders, and using clear and effective language.

c. Information and Data Literacy

What is meant by information and data literacy here can include the following aspects: searching for and evaluating information sources, using technology to access information, analyzing and interpreting data, using data to support decisions, and respecting privacy and data security.

d. Digital Content Production

What is meant by digital content production here can include the following aspects: developing digital content (text, images, video, audio), using technology to create content, editing and improving content, using copyright and licenses, and publishing content effectively.

C. Conceptual Framework

This conceptual framework examines how English as a Foreign Language (EFL) teachers' self-efficacy and use of information and communication technology (ICT) during learning activities take place. Based on important theories such as the TPACK framework, and Bandura's Self-Efficacy

Theory, this framework looks at how EFL teachers' ability to successfully integrate ICT tools into their teaching practices is influenced by things such as mentorship, ICT training, and past experiences.

Self-efficacy, Teacher Sense of Efficacy Scale (Bandura, 1997) (Tschannen Moran & Hoy, 2001)	ICT integration (TPACK) (Koehler, M. J., & Mishra, P., 2009)

Factor influencing Self-Efficacy	Challenges in ICT usage

OUTPUT Insights into the factors and challenges that influence self-efficacy in the use of ICT in learning
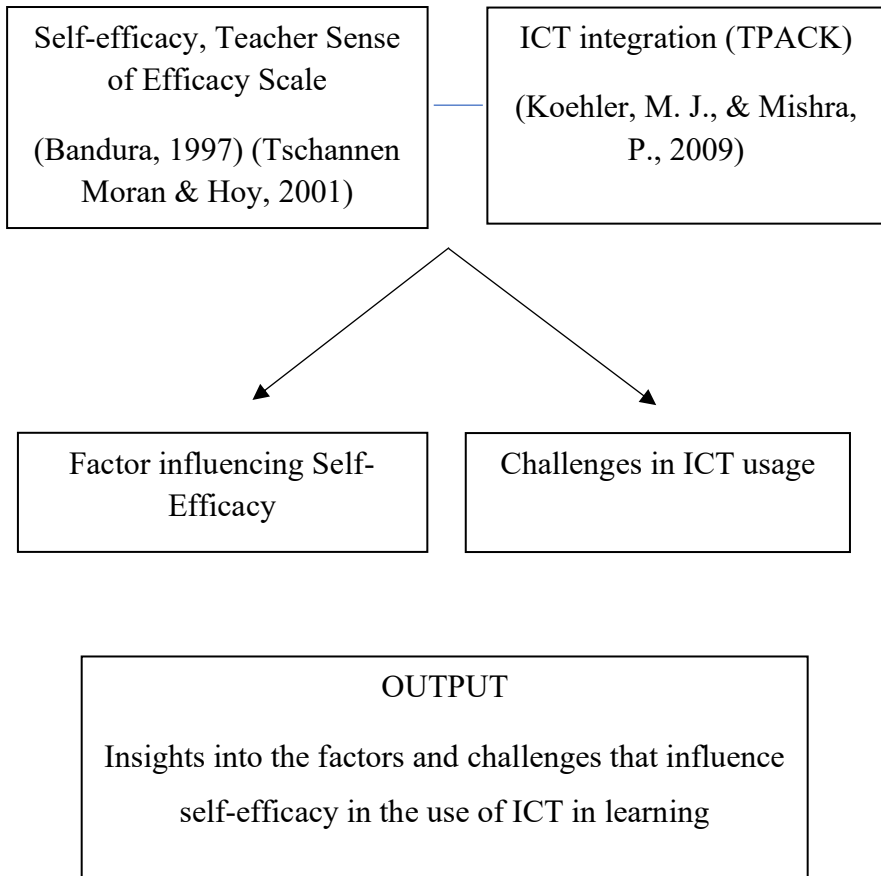
CHAPTER III

METHODOLOGY

A. Research Design

The self-efficacy perspectives on English as a Foreign Language (EFL) teachers in utilizing information and communication technology (ICT) during their learning activities are investigated in this study using a qualitative case study methodology. Understanding the complex, contextual elements influencing ICT self-efficacy in educational settings is made possible by a qualitative case study design, which enables an in-depth assessment of people's experiences and perspectives in real-world scenarios (Merriam & Tisdell, 2015; Yin, 2018).

The research process involves two main methods data collection. First, classroom observations were conducted as non-participant observation, which allowed the researcher to document the implementation of the use of ICT during English language learning, as well as the interaction between teachers and students. Second, semi-structured interviews with teachers were conducted to gather information about the extent of teachers' self-efficacy, what shapes teachers' self-

efficacy, and what are the challenges faced when implementing ICT.

B. Research Setting

This research was conducted at SD Islam Al-Azhar 25 Semarang from 3rd to 27th February 2025, an elementary school known for combining contemporary teaching techniques with Islamic beliefs. Research on the use of information and communication technology (ICT) in the classroom, particularly in the context of teaching English as a foreign language (EFL), was made easier by the school's positive atmosphere.

C. Research Participant and Sampling

Two English as a Foreign Language (EFL) teachers from SD Islam Al-Azhar 25 Semarang participated in this study, which allowed for in-depth exploration of individual experiences while maintaining manageability (Creswell & Poth, 2018). Purposive sampling, a non-probability sampling technique that allows the researcher to concentrate on specific people who best fit the purpose of the study, was used to select these teachers.

The participants in this case were selected because they actively use information and communication technology (ICT) in the classroom. The participants were selected based on several factors, such as EFL teachers who had at least three years of classroom teaching experience, have acquired ICT training, and had capacity to use ICT tools in their lessons.

The selection of the two of six teachers was based on their desire to engage in reflective practice and their active participation in professional development activities. By concentrating on these teachers, this study sought to investigate their self-efficacy in using ICT, the variables that influence it, and the difficulties they face while teaching.

D. Data Collection Method

This study will employ two main qualitative data-gathering techniques to gain an understanding of the participants' self-efficacy beliefs:

1. **Observation**

   The researcher observed teachers in order to gather information on their activities. According to (Sugiyono, 2019) observation is essentially an observation activity using the five senses to obtain information. Observation and recording are carried out on the object of research, about natural behavior, visible dynamics, description of behavior in accordance with the existing situation, and so on.

   There are four types of tools used to make observations: 1) note to make notes about events that apply to a particular case 2) a checklist sheet contains a list of observations to be given a check mark following the aspects observed 3) rating scale sheet is used to collect data that aims to explain, classify and assess a person or situation 4) mechanical devices are tools that contain technological elements such as cellphones, cameras, video recorders, and so on. The data is obtained in the form of checklist results, rating scales, pictures, photos, or videos which are then processed into a narrative or description of the research object under study.

2. **Semi-structured Interviews**

   The second technique for collecting data will be semi-structured interviews, which will provide participants a chance to share their opinions and experiences with

integrating ICT during teaching. The interviews will be conducted using open-ended questions that center on self-efficacy elements such as perceived difficulties, assistance received, and confidence in ICT usage. With participants' consent, audio recordings of their answers will be made during each 30–60 minute interview for transcription and analysis at a later time (Kallio et al., 2016).

E. Trustworthiness

To ensure the trustworthiness of the research analysis, a comprehensive validation approach was employed several systematic strategies. First, participants verified the accuracy of interview transcripts and interpretations through member checking to ensure their voices and experiences were accurately represented in the study (Merriam & Tisdell, 2015).

The second step uses data triangulation through comparison of teacher interviews and classroom observations to identify patterns, similarities and differences in experiences. This triangulation process strengthens confidence in the findings and facilitates a detailed understanding of how teachers' self-efficacy during the use of ICT in the classroom and what are the challenges faced when implementing ICT in language learning.

F. Research Instruments

1. Observation

Objective: To identify EFL teachers' application of ICT in the classroom and measure their self-efficacy level based on indicators of student engagement, instructional strategies, and classroom management.

Table 3.1 Instruments of teacher sense of efficacy scale based on indicators of student engagement, instructional strategies, and classroom management

Observed Aspect	Indicator	Observation Description	Score (1-5)	Additional Notes
Student Engagement	Teachers motivate students to actively use ICT in learning.	Observation of student interaction in the use of ICT.		
	Teachers encourage students to express questions	Notes on student participation.		

	or opinions related to the material using ICT.			
Instructional Strategies	Teachers select ICT-based learning strategies that are relevant to students' needs.	Observation of the suitability of the strategy to the learning objectives		
	Teachers use digital resources (videos, simulations, etc.) to enhance their understanding of the material.	Evaluation of teacher creativity in using ICT		
	Teachers utilize technology for	Analysis of the		

	immediate evaluation and feedback	effectiveness of technology-based evaluation strategies.		
Classroom Management	Teachers manage ICT-based learning time effectively.	Observations on time allocation and class control.		
	Teachers create a safe and conducive learning environment while using ICT.	Notes on students' comfort and safety when using technology		
	Teachers handle technical glitches (if any) well.	Observation of actions taken to overcome		

		technical obstacles.		
Teacher Digital Competence	Teachers are able to solve technical problems that arise when using ICT.	Observation of actions taken to overcome technical constraints		
Institutional Support	Availability of ICT devices that support learning.	Observation of facilities provided by the institution, such as laptops, projectors, etc.		
	Technical support from the school/institution.	Notes on technical assistance or training		

		received by teachers.		

Scoring Rubric

Score 1: Not applied at all.

Score 2: Applied very limitedly and less effectively.

Score 3: Moderately applied but not yet optimal.

Score 4: Well-implemented but there are still some shortcomings.

Score 5: Fully and effectively implemented.

2. Interview

Objective: To explore EFL teachers' experiences, perceptions, and challenges in using ICT in the classroom and to measure the factors that influence their self-efficacy.

Table 3.2 Instrument of factors influence EFL teachers' self-efficacy based on TSES in using ICT during learning activities in the classroom

Aspect	Item of Instruments	Objective
Students Engagement	How do you ensure students stay engaged in learning using ICT?	Identify teacher strategies in improving student engagement with technology.
	What obstacles do you often encounter regarding student participation in ICT-based learning?	Understanding the challenges of student participation.
Instructional Strategies	How do you choose and adapt ICT-based learning strategies to suit students' needs?	Understanding how teachers implement technology-based learning strategies

	What digital resources do you typically use, and why do you choose them?	Analyzing teachers' digital resource preferences
Classroom Management	What challenges do you face in managing the classroom when using ICT? How did you overcome them?	Explore teachers' ability to manage the classroom with the use of technology.
Teacher Digital Competence	How do you assess your digital capabilities in integrating ICT into learning?	Identify teachers' digital competencies and their confidence in using technology.
	Do you feel that you need additional	Understanding teacher training

	training on the use of ICT? Why?	needs related to technology
Institutional Support	How does support from your school/institution affect your use of ICT	Assess the impact of institutional support on self-efficacy and ICT adoption.
	Are the facilities provided adequate to support ICT integration?	Understand the extent to which the institution provides the required resources.

Table 3.3 Instrument of challenges that EFL teachers face in using ICT during learning activities in the classroom

Aspect	Item of Instruments	Objective

Infrastructure and Technology	Have you ever experienced technical problems when using ICT? How did you overcome them?	Knowing the technical obstacles experienced by teachers and their resolution strategies
Student Readiness	How do you deal with students who are less familiar or have difficulty using ICT in learning?	Understand the obstacles from the student side related to ICT implementation.
Time Management	How do you manage time to design and implement ICT-based learning?	Explore teachers' time management in technology-based learning.
Institutional Support	Do you get enough support from your school	Identify the role of institutional support in

	to use ICT? If not, what is missing?	successful ICT implementation.

G. Data Analysis

This study's data analysis will adhere to the three primary stages of (Miles et al., 2014) methodology for qualitative data analysis: data condensation, data display, and conclusion drawing/verification. This method works well for processing narrative material that is complicated, allowing the researcher to organize, synthesize, and analyze findings on EFL teachers' beliefs about their ability to use ICT.

1. Data Condensation

Data condensation is the process of selecting, focusing, simplifying, abstracting, and/or altering data from the entire corpus (body) of written-up field notes, interview transcripts, papers, and other empirical materials. Condensing makes data stronger. Initially, a verbatim transcription of the audio and video recordings was made to guarantee accuracy. The transcripts were then carefully examined to find recurring themes about the ICT use and self-efficacy attitudes of teachers. Data

were categorized using a coding scheme that was created, classifying them into pertinent codes including pedagogical beliefs, ICT knowledge, self-efficacy, and obstacles to ICT integration.

To find trends, patterns, and inconsistencies, the coded data was subsequently arranged and examined. An in-depth comprehension of the self-efficacy beliefs and ICT practices of the various participants was obtained by contrasting and comparing their responses. The findings were compiled and analyzed to shed light on the variables affecting the ICT use of English teachers.

2. **Data Display**

According to (Miles et al., 2014), display data is a brief, organized collection of data that permits deduction and action. The interconnection of the issues that surfaced from the data, including pedagogical views, ICT knowledge, self-efficacy beliefs, and obstacles to ICT integration, is graphically represented by this section. To further enhance the interpretation of the results and offer specific instances, direct quotes from the participants were also added to the theme map. This method of displaying data successfully communicates the intricacy

of the information while emphasizing the main ideas that came out of the interviews.

3. **Verifying Conclusion**

The last step is to evaluate the data to make inferences and confirm the results to guarantee their validity and correctness. Throughout the research process, the data will be regularly reviewed and reflected upon to conclude this study.

CHAPTER IV

RESULTS AND DISCUSSION

A. Findings

This chapter consists of two parts, which are the research results that answer the research questions and the research discussion of the research. The research results are obtained from the results of data analysis analyzing data from interviews and observations regarding the factors that influence EFL teachers' self-efficacy in using ICT in the classroom and the challenges faced by EFL teachers in using ICT in the classroom.

1. The Factors that Influence EFL Teachers' Self-efficacy in Using ICT in the Classroom

The findings are organized thematically, focusing on key areas such as student engagement, learning strategies, classroom management, teachers' digital competencies, technical challenges, student readiness, time management, and institutional support. Each section presents direct responses from teachers, followed by an in-depth analysis linking the findings to relevant theoretical frameworks and previous research.

The following table contains data on the factors influencing EFL teachers' self-efficacy in using ICT during learning activities in the classroom that correspond to the key elements of self-efficacy.

Table 4.1 Teachers' Voices on The Factors that Influence EFL Teachers in Using ICT in The Classroom

Components of Teacher Sense of Efficacy Scale	Informants	Teachers' Voices
Students Engagement	Teacher A	"... I usually add ice-breaking activities and games in the middle of the lesson to refocus students." (Q1)
	Teacher B	"... I rarely face problems keeping students engaged. Sometimes, I only need to remind one or two students to focus or " (Q1)

Instructional Strategies	Teacher A	"... we use *Cambridge* digital books because they are structured and align with our curriculum. Sometimes, I also show short *YouTube* videos, game, and also PPT to explain difficult topics." (Q2)
	Teacher B	"... besides *Cambridge* digital books, I integrate *Quizizz, Wordwall, and Baamboozle* to make learning interactive." (Q2)
Classroom Management	Teacher A	"... students in my class are very active, so I divide them into groups and use games with scoring systems to keep them engaged and conducive." (Q3)

	Teacher B	"... Older students understand classroom norms, so I rarely have to intervene. They automatically follow instructions or usually I move to the front bench, and sometimes we do ice breaking first, then also watch videos." (Q3)
Teacher Digital Competence	Teacher A	"... I feel very confident because I have been using ICT since I started teaching." (Q4.1) "Oh, definitely! We always receive training on new ICT tools to stay updated." (Q4.2)
	Teacher B	"... I am confident in using ICT because I have been using it from the beginning of my career." (Q4.1)

		"... Yes, continuous training is important. Every year, we attend ICT training sessions provided by the school." (Q4.2).
Institutional Support	Teacher A	"... Yes, the school provides great ICT support for both teachers and students." (Q5)
	Teacher B	"... The support from our school is excellent. We receive regular training and access to resources." (Q5)

The findings of the interview demonstrate that teachers employ a variety of instructional strategies to maintain student engagement in technology-enhanced learning environments. Teacher A, for instance, utilizes interactive digital tools such as *Quizizz* and *Baamboozle* to sustain student attention and motivation, particularly among younger students with shorter attention spans. She elucidates *"I usually add ice-breaking activities and games like Quizizz*

and Baamboozle in the middle of the lesson to refocus students" This pedagogical approach, which emphasizes game-based learning and active participation, has been widely recognized for its effectiveness in enhancing student motivation and retention. In contrast, Teacher B posits that older students require less structured intervention, as they have developed stronger self-regulation skills and can sustain focus with minimal external reinforcement. She stated: *"I rarely face problems keeping students engaged. Sometimes, I only need to remind one or two students to focus. "*

In terms of selecting teaching resources, Teacher A prioritizes structured digital resources such as *Cambridge* digital books, ensuring that the teaching materials are aligned with the curriculum while incorporating additional multimedia content for conceptual reinforcement*: "I use Cambridge digital books because they are structured and aligned with our curriculum. Sometimes I also show short YouTube videos, game, and also PPT to explain difficult topics".* In contrast, Teacher B favors a more interactive, gamified approach, using platforms such as *Quizizz, Wordwall,* and *Baamboozle* in addition to digital books to encourage engagement and active participation*: "In addition to Cambridge digital books, I integrate Quizizz, Wordwall*

and *Baamboozle to make learning interactive."* This variety in instructional design reflects differences in teaching philosophy and student needs, and demonstrates that teachers with high ICT self-efficacy adapt their strategies to optimize digital learning experiences.

Depending on the characteristics of the students, classroom management strategies also can be different. Teacher A, who teaches younger students, uses a structured, activity-based approach to maintain discipline and engagement: *"The students in my class are very active, so I divide them into groups and use games with scoring systems to keep them engaged disciplined, and conducive."* This suggests that gamification not only promotes engagement but also acts as a behavior management tool, reinforcing classroom norms through structured reward and participation systems. In contrast, because older students naturally understand expectations and require less direct intervention, Teacher B reports fewer classroom management challenges: *"Older students understand classroom norms, so I rarely have to intervene. They automatically follow instructions or usually I move to the front bench, and sometimes we do ice breaking first, then also watch videos."*

Despite facing different classroom dynamics, and largely due to their extensive experience with digital tools in educational settings, both teachers demonstrate high levels of digital literacy and confidence in ICT integration. Teacher A expressed her confidence by stating: *"I feel very confident because I have been using ICT since I started teaching."* Similarly, Teacher B expressed: *"I am confident in using ICT because I have been using it from the beginning of my career."* Both teachers recognize the importance of ongoing professional development to keep up to date with new technologies and best practices, despite reporting high levels of confidence in their ICT skills. Teacher A emphasized: *"Oh, definitely! We always receive training on new ICT tools to stay updated."* Teacher B reinforced the same idea*: "... yes, continuous training is important. Every year, we attend ICT training sessions provided by the school."* It suggests that ongoing ICT training improves teachers' ability to integrate digital tools effectively.

2. Challenges that EFL Teachers Face in Using ICT During Learning Activities in The Classroom

The section is organized thematically, focusing on key areas such as Infrastructure and Technology, Student

Readiness, Time Management, and Institutional Support. Each section presents direct responses from teachers, followed by an in-depth analysis that links the findings to relevant theoretical frameworks and previous research.

The following table contains data on The Challenges that EFL Teachers Face in Using ICT During Learning Activities in the Classroom.

Table 4.2 Teachers' Voices on The Challenges that EFL Teachers Face in Using ICT During Learning Activities in The Classroom

Components of Teacher Challenges based on TSES	Informants	Teachers' Voices
Infrastructure and Technology	Teacher A	"... there are very few technical problems here, but there have been blackouts. I usually have an alternative ready, which is to continue

		the lesson without the use of the internet, such as using a manual book and playing games without the need for the internet." (Q1)
	Teacher B	"... technical problems rarely occur, but I have experienced internet trouble. Then most of the speaker system in each class is different, sometimes there is a lack of clear sound, for that alternative, I bring my own speaker, especially when listening lessons." (Q1)

Student Readiness	Teacher A	"... I have prepared guidelines for the use of digital platforms or ICT tools before learning of course, whether it is in the classroom during learning, or when I give homework on online platforms, I have provided guidelines beforehand." (Q2)
	Teacher B	"... For lower grades, they may be less familiar, but for the students I teach, which are higher grades, they are very familiar and quickly grasp digital concepts. So, most of them are

		very familiar with the tools in this era." (Q2)
Time Management and Lesson Preparation	Teacher A	"... I usually prepare the material about three days before class. Because there is already a guide from the Cambridge book, so I just need to develop it. For time management in class, maybe I will stall a little when the students have started to be a bit crowded." (Q3)
	Teacher B	"... I prepare the materials one week before class, but remain flexible if there are additional needs, then I will

		provide supporting materials at that time so that students understand better. For time management in class, there is not really a problem, because the students are obedient so there is no delay in lesson time." (Q3)
Institutional Support	Teacher A	"... in this school, I think the support for ICT is very good, both for teachers and students." (Q4)
	Teacher B	"…. definitely yes, I think the support from the school has been very good for the use of ICT itself." (Q4)

It is apparent from the interview findings in the table above about infrastructure and technology, that technical issues are unusual for Teacher A, she has had power outages, necessitating offline lesson options. As indicated by Teacher A, *"… there are very few technical problems here. I usually have an alternative ready which is to continue the lesson without the use of the internet, such as using a manual book and playing games without the need for the internet."* While teacher B said, *"… I have experienced internet trouble. Then most of the speaker system in each class is different, sometimes there is a lack of clear sound, for that alternative, I bring my own speaker"* From the statement, it means that Teacher B faced occasional internet interruptions and inconsistent speaker quality throughout the classroom, which affected listening activities. To overcome this, they bring their own equipment. These findings suggest that the limitations of the infrastructure continue to be a significant challenge to the integration of ICT in the classroom. While teacher A relies on prepared offline alternatives, teacher B actively compensates for inconsistent ICT tools through the use of personal equipment. Their ability to develop

alternative solutions reflects a strong self-efficacy for technology integration despite these challenges.

While in student readiness, in accordance with Teacher A's statement, *"… I have prepared guidelines for the use of digital platforms or ICT tools before learning."* because she teaches lower levels, she gives thorough instructions before class, and for assignments, Teacher A ensures that students are comfortable using the ICT equipment. Teacher B found that higher-grade students adapted more quickly to ICT-based learning, which meant that she did not need to instruct the students in her class more rigorously, unlike the younger students who had some difficulty using digital tools. In accordance with her statement, *"… they are very familiar and quickly grasp digital concepts. So, most of them are very familiar with the tools."* The results show that there is a clear difference in the readiness of students based on their grade level. Students in lower grades require structured guidance and continuous monitoring, while students in higher grades show a greater degree of independence in navigating digital platforms. This suggests that teachers need to adapt their instructional approaches based on students' familiarity with ICT tools to

ensure effective engagement with digital learning experiences.

In the case of time management, Teacher A uses a systematic framework to prepare materials three days ahead of time, but she makes adjustments in real-time based on student involvement. As she said, *"… I usually prepare the material about three days before class. For time management in class, maybe I will stall a little when the child has started to be a bit crowded."* Meanwhile, Teacher B said *"… I prepare the materials one week before class, but remain flexible. For time management in class, there is not really a problem, because the students are obedient."* From Teacher B's statement, it can be interpreted that Teacher B prepares classes a week in advance, but she makes necessary content modifications to improve comprehension and have fewer time management challenges. These findings indicate that the temporal allocation for lesson preparation may be subject to variation according to students' behavioral and engagement levels. Teachers responsible for the instruction of younger students are observed to require greater flexibility in the pacing of lessons, while those engaged in the instruction of older students, characterized by higher levels of discipline, are observed to adhere to a greater degree of

structure in their lesson scheduling. Furthermore, it is noted that teachers exhibiting strong ICT self-efficacy are inclined to utilize digital tools in the development of lesson plans while demonstrating an openness to adaptation in order to optimize learning experiences for students.

In the case of Institutional Support, according to Teacher A's statement *"... I think the support for ICT is very good, both for teachers and students."* It means that Teacher A recognizes that the institution provides excellent support, including digital resources and ICT training. Similarly, Teacher B emphasized the positive school policies that enhance ICT implementation in the following statement, *"... I think the support from the school has been very good for the use of ICT itself."* It can be concluded that they both get good institutional support from the school to support ICT-based learning. These findings indicate that the provision of institutional support is a crucial catalyst for the adoption of ICT. The accessibility of digital tools and the availability of training programs, in conjunction with administrative backing, have been identified as key factors in fostering teacher confidence in utilizing technology-based instructional methods. Schools that accord prioritization to the integration of ICT are found to be conducive to enhancing

teacher digital proficiency and optimizing learning
outcomes.

B. Discussions

Digital competency, classroom management,
instructional strategies, student involvement, and
institutional support are some of the characteristics that affect
EFL teachers' self-efficacy in utilizing ICT, according to the
interview results. Teachers also have to deal with problems
like student preparedness, time restrictions, technical
infrastructure, and differing institutional support levels. In
light of previous research and theoretical viewpoints, these
elements and issues are examined in the discussion.

1. The Factors that Influence EFL Teachers' Self-efficacy in Using ICT in the Classroom

A significant factor influencing teachers' self-efficacy in
technology-enhanced instruction is the strategy employed to
engage students. Teachers have indicated that students
require a more structured and interactive approach to
learning, such as combining teaching activities with games,
to maintain their engagement. Teacher A emphasizes the use
of ice-breaking activities and interactive tools, such as
Quizizz and *Baamboozle.* Conversely, teacher B noted that

older students require minimal intervention, as they possess the capacity to self-regulate their focus during lessons. This finding aligns with the self-efficacy theory proposed by Bandura (Perry et al., 2002), which posits that individuals with high self-efficacy tend to proactively seek strategies to engage students.

Instructional strategies have been shown to play a pivotal role in the development of ICT self-efficacy (Ertmer et al., 2024b). Teachers have noted the importance of structured digital resources in this regard. For instance, Teacher A has indicated a preference for *Cambridge* digital books to ensure curriculum alignment, while also employing interactive quizzes for ice-breaking and refocusing students. Teacher B, meanwhile, has integrated *Quizizz, Wordwall*, and *Baamboozle* for interactive learning materials, complementing the use of *Cambridge* digital books. This aligns with the findings of (Ertmer et al., 2024b), who reported that teachers with high ICT confidence employ a combination of structured learning resources and interactive tools to enhance student engagement.

In regard to the implementation of effective classroom management strategies, Teacher A indicated that younger

students required structured group activities and a system for evaluating their performance to maintain discipline. Conversely, Teacher B noted that older students exhibited a natural inclination to adhere to the established norms of the classroom environment. This observation suggests that teachers with higher levels of ICT self-efficacy adapt their classroom management techniques to align with the specific needs of their students. This approach is in accordance with the model of teacher self-efficacy proposed by (Tschannen-Moran & Hoy, 2001), which emphasizes the importance of adaptability in teaching methodologies.

Digital competence and professional development are crucial for teacher confidence in ICT use. Both teachers expressed high confidence in their digital abilities, with Teacher A stating, *"I feel very confident because I have been using ICT since I started teaching,"* and Teacher B confirming*, "I am confident in using ICT because I have been using it from the beginning of my career."* This finding aligns with the conclusions of (Knezek & Christensen, 2002), who posited that frequent exposure to and experience with technology significantly enhances teachers' digital competence and inclination to adopt innovative practices. Furthermore, both teachers underscored the significance of

ongoing ICT training, thereby corroborating the assertions of (Lucas et al., 2021), who contend that sustained professional development has a substantial impact on enhancing teachers' confidence in utilizing digital tools.

2. **Challenges that EFL Teachers Face in Using ICT During Learning Activities in The Classroom**

Despite their high self-efficacy, both teachers encountered technical challenges, primarily concerning technology infrastructure and reliability. Teacher A noted that power outages occasionally disrupted lessons, while Teacher B mentioned internet instability and inconsistent speaker systems across classrooms, stating, *"I have had problems with the internet. Then most of the speaker systems in each classroom are different, sometimes the sound is not clear enough."* This observation aligns with the findings of (Akram et al., 2022), who reported that inconsistent ICT infrastructure can impede the effective utilization of technology in educational settings. However, teachers with high self-efficacy frequently devise contingency plans, as evidenced by Teacher A's approach of employing offline alternatives, such as physical books and non-digital activities.

Student readiness has been demonstrated to have an impact on ICT integration as well. Teacher A ensured that students had a firm grasp on the digital platform by providing clear guidance prior to the lesson, while Teacher B noted that higher-grade students exhibited a natural familiarity with technology, while younger students required additional assistance. This finding aligns with the research conducted by (Faloye & Faniran, 2023), who determined that students' prior exposure to technology significantly affects their adaptability to ICT-enhanced learning. Teachers with higher ICT self-efficacy frequently employ pre-learning strategies to bridge the digital literacy gap (Knezek & Christensen, 2002).

In ICT-based learning, time management is still a significant concern. Whereas Teacher B planned a week in advance but made necessary content adjustments, Teacher A prepared materials three days in advance. As a result, teachers who use ICT should devote more time to lesson design and be more flexible. In support of this finding, (Lawrence & Tar, 2018) discovered that although ICT-based learning gives greater flexibility in material delivery, it also necessitates more preparation. Finally, institutional support has been shown to play a significant role in teachers'

confidence in using information and communication technology (ICT). In this study, both teachers acknowledged strong ICT support from their institutions, thereby providing evidence that validates (Kundu et al., 2020) research. (Kundu et al., 2020) research found that schools with structured ICT policies, training programs, and technical support have the potential to increase teachers' confidence. However, in many educational environments, limited administrative support and lack of training opportunities are still significant barriers (Celik et al., 2022).

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

The present study set out to investigate the factors that influence the self-efficacy of EFL teachers with regard to the use of ICT in classroom settings, in addition to the challenges they encounter in relation to ICT integration. The findings, derived from a series of interviews and observations, have enabled the drawing of several key conclusions.

Firstly, this study explores the influence of diverse aspects that shape EFL teachers' self-efficacy in ICT use. The analyses revealed complex interactions of multiple factors, including student engagement, instructional strategies, classroom management, teacher digital competence, and institutional support. Teachers who demonstrated high levels of self-efficacy in this domain utilized a variety of interactive tools and structured digital resources, alongside gamified learning strategies, with the aim of maintaining effective student engagement. A key finding of this study was the presence of high adaptability in managing classroom behavior, as well as in structuring lessons with the aim of

enhancing the learning experience. In addition, ongoing professional development and ICT training have been shown to significantly contribute to teachers' confidence, enabling them to integrate technology more effectively.

Secondly, the use of ICT in the classroom environment is faced with several constraints, mainly related to technical infrastructure, students' proficiency levels, effective time management, and inadequate administrative support. Teachers have attested to interruptions in internet connectivity, variable quality of audio-visual equipment, and intermittent power outages, which necessitate the formulation of alternative instructional methodologies. Students' proficiency levels showed differences; those in the younger age group required more clearly structured guidance compared to their older counterparts who adapted quickly to ICT tools. In addition, ICT-based pedagogies require careful lesson preparation, making effective time management an important factor in their implementation. While institutional support is generally strong, some challenges related to resource allocation and digital accessibility remain.

Overall, this study suggests that improving teachers' self-efficacy defined as the extent to which teachers believe in

their ability to implement new teaching techniques through continuous ICT training, better digital infrastructure, and structured support systems can facilitate more effective technology integration in EFL classrooms.

B. Suggestions

The study's conclusion is followed by the proposition of various recommendations for teachers, educational institutions, and policymakers, with the aim of enhancing the integration of Information and Communication Technologies in the domain of English as a Foreign Language teaching.

1. For the teacher

    In order to enhance their digital competence, it is essential that teachers participate in ongoing ICT training to develop their ability to use a variety of online platforms effectively. Furthermore, it is imperative that they adopt adaptive teaching strategies by integrating structured learning materials with interactive digital tools to improve student engagement.

2. For the school and institutions

    Schools play an important role in ICT integration by enhancing technological infrastructure, maintaining a steady internet and power supply, and reducing digital

learning disruptions. Regular ICT training workshops keep teachers up to date on technological changes, while student digital literacy initiatives, particularly for younger students, assist in developing essential ICT skills prior to using advanced tools. These initiatives improve teacher effectiveness, student engagement, and overall learning results in a technology-driven educational system.

3. For the government

Government and legislators should increase financing for ICT infrastructure, digital tools, and e-learning platforms to guarantee that all students have equal access. Establishing inclusive ICT policy is critical for bridging the digital divide between urban and rural schools. Furthermore, authorities should encourage continuous research in ICT-based education to develop successful and long-term technology integration policies that promote innovation and accessibility in digital learning.

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APPENDICES

APPENDIX 1: List of Interview Questions

a. *Instrument of factors influence EFL teachers' self-efficacy in using ICT during learning activities in the classroom*

Aspect	Item of Instruments
Students Engagement	How do you ensure students stay engaged in learning using ICT?
	What obstacles do you often encounter regarding student participation in ICT-based learning?
Instructional Strategies	How do you choose and adapt ICT-based learning strategies to suit students' needs?
	What digital resources do you typically use, and why do you choose them?

Classroom Management	What challenges do you face in managing the classroom when using ICT? How did you overcome them?
Teacher Digital Competence	How do you assess your digital capabilities in integrating ICT into learning?
	Do you feel that you need additional training on the use of ICT? Why?

b. *Instrument of challenges that EFL teachers face in using ICT during learning activities in the classroom*

Aspect	Item of Instruments
Infrastructure and Technology	Have you ever experienced technical problems when using ICT? How did you overcome them?
Student Readiness	How do you deal with students who are less familiar or have difficulty using ICT in learning?

Time Management	How do you manage time to design and implement ICT-based learning?
Institutional Support	Do you get enough support from your school to use ICT? If not, what is missing?

APPENDIX 2: Interview Results

- **TEACHER A**

Date/day of interview : Wednesday, 19th February 2025

Time   : 10.30 – 11.30

Respondent   : Teacher A (Miss Muna)

Interviewer   : Salma Muhimmatun Nisa

- **TEACHER B**

Date/day of interview : Monday, 24th February 2025

Time   : 14.30 – 15.30

Respondent   : Teacher B (Miss Isti)

Interviewer   : Salma Muhimmatun Nisa

a. ***Teachers' Voices on The Factors that Influence EFL Teachers in Using ICT in The Classroom***

Components of Self-efficacy	Informants	Teachers' Voices
Students Engagement	Teacher A	**Q:** "Well, thank you for your time, ma'am... let me ask you a question related to student engagement, what obstacle do you often encounter in student participation in ICT based learning and how do you ensure students stay engaged in learning using ICT?" **A:** " oh ya, because I teach lower grade levels, it is usually easier for children to lose focus during lessons, especially since

		most of my students have kinesthetic learning styles, so to keep students focused I usually add ice breaking activities and games in the middle of the lesson to refocus the students."
	Teacher B	**A:** "Since I teach at a fairly higher-grade level and the students have also started to understand how to behave during the lesson, when one or two students start to lose focus, to keep the students focused, I rarely face problems in keeping the students focused. Sometimes, I just need to remind one or two students to focus, after

		which they can follow the lesson with focus again."
Instructional Strategies	Teacher A	**Q:** Okay, then in instructional strategies, how do you choose and adapt ICT based learning to suits students needs? And what digital resource you typically use?" **A:** " For that, we usually use the *Cambridge* curriculum for the main handbook, because they are align with our curriculum and this school uses that handbook at all levels. However, I also adjust the needs of the students so that they don't bother, sometimes, I also show games and YouTube videos to explain difficult

		topics when students still don't understand what is in the book. I also use power point to add material so that students are more familiar with how to read and write."
	Teacher B	**A:** "Actually, in this school, we use the Cambridge curriculum for the main guidebook. However, students sometimes get bored, so usually besides *Cambridge* digital books, I intersperse them with integrate *Quizizz, Wordwall, and Baamboozle* to make learning interactive. So, students don't get bored either."

Classroom Management	Teacher A	Q: "My next questions is, what challenges do you face in managing the classroom and how did you overcome them?" A: "Students in my class are very active, for the class that I teach, it is indeed a kinesthetic learning style, so, I manage them to be orderly by making groups, then often playing games and giving points, so they can still be conducive."
	Teacher B	A: "Well, if the class I teach has started to understand even though there are some children who still like to be crowded, but I just remind them once they

		immediately understand or usually I move to the front bench. Or sometimes we do ice breaking first, then also watch videos, after that students will start to be happy and calm."
Teacher Digital Competence	Teacher A	Q: "How do you asses your digital capabilities in ICT? and do you feel need additional training on the use of ICT?" A: "Oo for that, I feel very confident because I have been using ICT since I started teaching, actually." (Q.1) "Oh, definitely! We always receive training on new ICT tools to stay

		updated. Alhamdulillah, our school is always following the development of technology and usually we are also assigned by the office only to conduct training on the latest technology, like that."
	Teacher B	**A:** "Ooh, to be honest I am confident in using ICT because I have been using it from the beginning of my career." (Q.1) **A:** "Yes, continuous training is important. Every year, we attend ICT training sessions provided by the school. Even though we often use ICT tools, today's technology advances very quickly, so

		I think teachers need to upgrade." (Q.2).
Institutional Support	Teacher A	**Q:** "Do you get enough support from your school to use ICT?" **A:** "Yes, the school provides great ICT support for both teachers and students."
	Teacher B	**A:** "The support from our school is excellent. We receive regular training and access to resources."

b. Teachers' Voices on The Challenges that EFL Teachers Face in Using ICT During Learning Activities in The Classroom

Components of Teacher Challenges	Informants	Teachers' Voices
Infrastructure and Technology	Teacher A	**Q:** " Have you over experience technical problem when using ICT? And how did you overcome them? " **A:** "There are very few technical problems here, but there have been blackouts. I usually have an alternative ready, which is to continue the lesson without the use of the internet, such as using a manual book and

		playing games without the need for the internet."
	Teacher B	**A:** "Technical problems rarely occur, but I have experienced internet trouble. Then most of the speaker system in each class is different, sometimes there is a lack of clear sound, for that alternative, I bring my own speaker, especially when listening lessons."
Student Readiness	Teacher A	**Q:** "How did you deal with student who are less familiar in using ICT in learning?" **A:** "I have prepared guidelines for the use of digital platforms or ICT tools before learning of

		course, whether it is in the classroom during learning, or when I give homework on online platforms, I have provided guidelines beforehand."
	Teacher B	**A:** "For lower grades, they may be less familiar, but for the students I teach, which are higher grades, they are very familiar and quickly grasp digital concepts. So, most of them are very familiar with the tools in this era."
Time Management	Teacher A	**Q:** "how do you manage tme to design and implement ICT based learning?"

and Lesson Preparation		**A:** "I usually prepare the material about three days before class. Because there is already a guide from the Cambridge book, so I just need to develop it. For time management in class, maybe I will stall a little when the students have started to be a bit crowded."
	Teacher B	**A:** "I prepare the materials one week before class, but remain flexible if there are additional needs, then I will provide supporting materials at that time so that students understand better. For time management in class,

		there is not really a problem, because the students are obedient so there is no delay in lesson time."
Institutional Support	Teacher A	**Q:** "Do you get enough support from your school to use ICT? If not, what is missing?" **A:** "In this school, I think the support for ICT is very good, both for teachers and students."
	Teacher B	**A:** "The support from our school is excellent. We receive regular training and access to resources."

APPENDIX 3 : Observation Results

Teacher A

Observed Aspect	Indicator	Observation Description	Score (1-5)	Additional Notes
Student Engagement	Teachers motivate students to actively use ICT in learning.	Observation of student interaction in the use of ICT.	5	The teacher gives scores to students who want to come forward to answer the questions on the projector screen.
	Teachers encourage students to express questions or opinions related to the	Notes on student participation.	5	

	material using ICT.			
Instructional Strategies	Teachers select ICT-based learning strategies that are relevant to students' needs.	Observation of the suitability of the strategy to the learning objectives	5	the teacher provides material from the digital *cambridge* book and plays an interesting video.
	Teachers use digital resources (videos, simulations, etc.) to enhance their understanding of the material.	Evaluation of teacher creativity in using ICT	5	

	Teachers utilize technology for immediate evaluation and feedback	Analysis of the effectiveness of technology-based evaluation strategies.	5	students look interested so that they feel comfortable when the lesson takes place
Classroom Management	Teachers manage ICT-based learning time effectively.	Observations on time allocation and class control.	5	
	Teachers create a safe and conducive learning environment while using ICT.	Notes on students' comfort and safety when using technology	4	because this is a low class, so occasionally students move from their seats but still

				follow the learning well.
	Teachers handle technical glitches (if any) well.	Observation of actions taken to overcome technical obstacles.	**5**	
Teacher Digital Competence	Teachers are able to solve technical problems that arise when using ICT.	Observation of actions taken to overcome technical constraints	**5**	
Institutional Support	Availability of ICT devices that support learning.	Observation of facilities provided by the institution, such as	**5**	

		laptops, projectors, etc.		
	Technical support from the school/institution.	Notes on technical assistance or training received by teachers.	5	every year a workshop will be held for teachers regarding updates on the use of ICT.

Teacher B

Observed Aspect	Indicator	Observation Description	Score (1-5)	Additional Notes
Student Engagement	Teachers motivate students to actively use ICT in learning.	Observation of student interaction in the use of ICT.	5	

	Teachers encourage students to express questions or opinions related to the material using ICT.	Notes on student participation.	**5**	
Instructional Strategies	Teachers select ICT-based learning strategies that are relevant to students' needs.	Observation of the suitability of the strategy to the learning objectives	**5**	
	Teachers use digital resources (videos, simulations, etc.) to enhance their understanding of	Evaluation of teacher creativity in using ICT	**5**	teachers use ppt and also cambridge digital books for

	the material.			learning materials
	Teachers utilize technology for immediate evaluation and feedback	Analysis of the effectiveness of technology-based evaluation strategies.	**5**	
Classroom Management	Teachers manage ICT-based learning time effectively.	Observations on time allocation and class control.	**5**	
	Teachers create a safe and conducive learning	Notes on students' comfort and safety when	**5**	

	environment while using ICT.	using technology		
	Teachers handle technical glitches (if any) well.	Observation of actions taken to overcome technical obstacles.	**5**	
Teacher Digital Competence	Teachers are able to solve technical problems that arise when using ICT.	Observation of actions taken to overcome technical constraints	**5**	
Institutional Support	Availability of ICT devices that support learning.	Observation of facilities provided by the institution, such as laptops,	**5**	

		projectors, etc.		
	Technical support from the school/institution.	Notes on technical assistance or training received by teachers.	5	every year a workshop will be held for teachers regarding updates on the use of ICT.

APPENDIX 4: Photos and Activity Documentation

(Figure 6.4.1 Learning Activities Using ICT)

(Figure 6.4.2 Learning Activities Using ICT)

(Figure 6.4.3 Learning Activities Using ICT)

(Figure 6.4.4 Learning Activities Using ICT)

(Figure 6.4.5 Observation session)

(Figure 6.4.6 Interview session with Teacher A)

(Figure 6.4.7 Interview Session with Teacher B)

CURRICULUM VITAE

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