



## Indonesian English as A Foreign Language Teachers' Perception on Technology for Assessment

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#### ABSTRACT

*This study investigates teachers' perceptions of technology as an assessment tool in English as a Foreign Language (EFL) classroom, focusing on the integration of digital tools to enhance educational practices. The researchers use qualitative descriptive method that includes two instruments such as questionnaire and interview. It highlights the transformative impact of technology on assessment methods, enabling diverse formats that cater to various learning styles and foster student engagement. While many EFL teachers express positive attitudes towards using technology—recognizing its potential for immediate feedback and streamlined processes—significant challenges persist. These include inadequate training, limited resources, and concerns about the reliability of online assessments, particularly in remote learning contexts. The study aims to fill a gap in existing literature by examining these perceptions within the Indonesian educational framework, emphasizing the need for ongoing professional development to empower teachers in effectively utilizing technology for assessment. Thought identifying common obstacles and proposing strategies to overcome them, this research contributes to enhancing the effectiveness of technology integration in EFL assessment practice.*

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### INTRODUCTION

Digital technology has revolutionized educational practices by providing new ways to engage students and evaluate their learning outcomes. In EFL contexts, technology allows for a variety of assessment methods that can improve student motivation and participation, such as using an MP4 player to play a video with sound through an LCD projector for a speaking class and an MP3 player to play dialogues or songs for a listening class (Eryansyah et al., 2019). Additionally, assessing tools like digital portfolios, interactive learning platforms, and online quizzes allow for real-time feedback and individualized learning experiences. As Jamshed et al. (2024) emphasizes, integrating platforms such as social media into EFL instruction can not only enhance engagement but also provide formative assessment opportunities through real-time feedbacks and digital participation metrics. Furthermore, Cao et al. (2025) highlights how mobile technologies like WeChat serve dual functions as communication platforms and embedded assessment tools helping educators track student interactions, submissions, and progress

effectively. Finally, technology allows teachers to more effectively gather and analyse students' performance data, giving insights that could guide the development of curriculum and instruction.

Teachers' perceptions regarding the implementation of technology as an assessment tool in English as a Foreign Language (EFL) classrooms are pivotal in understanding how educational technology can enhance learning outcomes. In recent years, the integration of technology in education has gained momentum, particularly in EFL contexts, where it serves not only as a medium for instruction but also as a mechanism for assessment. This research aims to explore various dimensions of teachers' perceptions towards utilizing technology for assessment purposes, focusing on both the benefits and challenges they encounter. Many EFL teachers hold positive attitudes towards the use of technology in their classrooms. They recognize its potential to engage students, streamline assessment processes, and provide immediate feedback on student performance. For instance, teachers often utilize platforms such as Google Classroom and online quizzes to facilitate formative assessments that monitor student progress effectively (Mollaei & Riasati, 2013; Astiandani & Anam, 2021). The ability of technology to offer diverse assessment formats ranging from multiple-choice questions to interactive tasks enables teachers to cater to different learning styles and needs.

Despite these positive perceptions, several challenges hinder the effective implementation of technology as an assessment tool. Issues such as inadequate training, limited access to resources, and varying levels of students' technological proficiency can create barriers (Mali, 2023). Teachers often express concerns about the reliability of online assessments and the integrity of student submissions, particularly in remote learning environments (Wicaksono & Anam, 2022). Furthermore, external factors such as internet connectivity issues can disrupt the assessment process, leading to frustration among educators and students alike. To maximize the benefits of technology in assessment practices, ongoing professional development for teachers is essential. Training programs that focus on effective technology integration strategies can empower educators to navigate challenges and enhance their pedagogical approaches. Through fostering a supportive environment that encourages experimentation with new tools and methods, educational institutions can help teachers develop confidence in using technology for assessment purposes.

Although a large number of studies on teachers' perception towards technology as an assessment tool have been done, previous studies have predominantly concentrated on online classroom and technology as a teaching media. In Indonesia context, Wicaksono and Anam (2022) have investigated the English teachers' perception of the practice assessment in online classroom during Pandemic of Covid-19. While Mollaei (2012) conducted a research to investigate the perception of EFL teachers regarding the use of technology in the teaching and learning process and to identify factors that affect the implementation of technology. In this case, the discussion about technology as a student assessment tool in classroom learning still needs to be done in order to increase the effectiveness of educational activities. Therefore, this study attempts to fill the gap by examining Indonesian secondary EFL teachers' perceptions of their implementation of technology as an assessment, its challenges during its implementation, as well as ways to overcome them.

## METHODS

This research uses descriptive qualitative as the design of this study, and it is because the researcher wanted to explore and describe the characteristics of a population or phenomenon based on a research question. Qualitative design as the study of a phenomenon and explicit

knowledge of the phenomenon (Creswell, JW; Poth, 2017). According to Braun et al. (2019), descriptive research refers to a research design that aims to provide a comprehensive and accurate description of a particular phenomenon or event. This research design aimed to describe teachers' perception on implementation of technology as an assessment tool in EFL classrooms.

The study was conducted in a junior high school which implemented technology as an assessment tool in EFL classroom. The sample in this study was determined based on the experience of teachers who applied technology in the assessment process in their EFL classes and also based on the length of time they have been using technology in assessing students' work so that the data obtained can be more accurate. Then, the researcher selected four teachers who were experienced in implementing technology in their assessment process. In this research, the data was collected using two techniques namely, interviews and questionnaires. Based on these techniques, the instruments used in this study were two: interviews and questionnaires. During the study, teachers were asked four interview questions, namely: 1) What challenges do you face when implementing technology as an assessment tool in your EFL classroom?; 2) How do you manage situations when students face difficulties accessing technology?; 3) Which strategies have you used to overcome the challenges when implementing technology as an assessment tool in your EFL classroom?; 4) What types of technology do you use to assess students' work?. While the questionnaire includes seven questions.

Based on the questionnaire, participants were expected to select a degree for each category. Once the surveys were returned, they were analyzed to determine the results. The categorization was then assessed based on the percentages of the responses of teachers. The questionnaire produced five categories for data classification, including strongly agree, agree, neutral, disagree, and strongly disagree. The percentage ranges for each category were adopted from Wenny et al. (2022). For example, the category of strongly agree corresponded to a percentage range of 81%- 100%. Meanwhile, the category of agree, neutral, disagree, and strongly disagree spanned the percentage ranges of 61%-80%, 41%-60%, 21%-40%, and 0%-20%, respectively.

The data obtained were subsequently analyzed using qualitative data analysis. According to Burn (1999) there are five steps in analysing the qualitative data. They are stated below:

1. Assembling the Data: throughout this step, the researcher gathers data to determine what actually happened during the time of the study. Field notes and interview transcripts were used to collect data.
2. Encoding the Data: researchers recognize the data in this study by grouping them into more detailed patterns and classifications.
3. Comparing the Data: the researcher evaluates the categories or patterns across the various data collection methods after coding the data.
4. Building Interpretation: at this point, the researcher must deal with a significant degree of creative thinking about what the data indicates by reflecting on more than the immediate surface features.
5. Reporting the Results: at this stage, the researcher considers several factors when reporting the findings of this study, including discussing the problem or question driving the research, describing the research context, analysing the findings by providing a sample of data, and interpreting how the project might lead to other areas of research.

## RESULTS AND DISCUSSION

### Findings

This research uses a data collection method in the form of a questionnaire and interview to obtain teacher perceptions regarding to the implementation of technology as an assessment tool in EFL classroom. The results of the questionnaire are shown in Table. 1 below.

**Table 1. The Percentage of Teachers' Perception to The Implementation of Technology as an Assessment Tool**

| No | Questions                                                                                                                           | Percentage     |       |         |          |                   |
|----|-------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
|    |                                                                                                                                     | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
| 1  | You are familiar with technology in assessing students' work.                                                                       | 50%            | 25%   | 25%     | -        | -                 |
| 2  | Technology is an effective and accurate tool to assess students' work in EFL classroom.                                             | 50%            | 25%   | 25%     | -        | -                 |
| 3  | The internet connection in my school is not stable enough to effectively use technology for assessment.                             | 50%            | 25%   | 25%     | -        | -                 |
| 4  | I have lack sufficient training on how to use technology effectively as an assessment tool.                                         | 25%            | 50%   | 25%     | -        | -                 |
| 5  | There are not enough resources (e.g., projectors, smartboards) in my classroom to facilitate the use of technology for assessments. | 50%            | 25%   | 25%     | -        | -                 |
| 6  | Time constraints prevent me from fully implementing technology-based assessments.                                                   | 50%            | -     | 50%     | -        | -                 |
| 7  | I adapt my assessment tools to work offline or with minimal internet access.                                                        | 50%            | -     | 25%     | 25%      | -                 |
| 8  | I collaborate with colleagues to share resources and knowledge on using technology for assessments.                                 | 50%            | -     | 25%     | 25%      | -                 |
| 9  | I provide students with additional guidance or training to help them use technology for assessments.                                | 75%            | 25%   | -       | -        | -                 |
| 10 | The students more excited when the teachers use technology to give the assesment.                                                   | 50%            | 25%   | 25%     | -        | -                 |

|    |                                                                                                                                       |     |     |     |     |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|---|
| 11 | I have received adequate professional development or support for using technology in assessments.                                     | 25% | 50% | -   | 25% | - |
| 12 | I believe that overcoming the challenges of using technology for assessments can lead to better educational outcomes for my students. | 50% | 25% | 25% | -   | - |
| 13 | I would like more professional development opportunities related to using technology for assessments.                                 | 25% | 25% | 50% | -   | - |

The data collected from the survey of EFL teachers reveals critical insights into their perceptions of technology's role in assessment practices. The table summarizes various aspects, such the effectiveness, the challenges, the strategies, students' engagement, and support structures.

1. The effectiveness of technology: The data indicates that a majority (75%) believe that technology enhances the accuracy and efficiency of assessments. They are also familiar with the technology in assessing their students' work. Conversely, around 25% felt that technology did not significantly improve assessment quality, highlighting a divergence in experiences.
2. The challenges in implementing technology: The teachers face many challenges in implementing technology to assess students' work. Based on the data, 75% teachers get the difficulties such as unstable internet connection, lack of sufficient training, lack of resources (e.g, projectors, smartboard) in their classroom to facilitate the use of technology for assessment. While the other 25% did not significantly face those difficulties.
3. The strategies to overcome the difficulties: Based on the data, it shows that all of the teachers (100%) provide their students with additional guidance to help them use technology for assessments. While 50% of the teachers collaborate with colleagues to share resources and knowledge on using technology to assess students' work and they also adapt the assessment tools to work offline or with minimal internet access to overcome the unstable connection in their school.
4. Students' engagement: The findings show that all of the teacher (75%) observed the student engagement increasing when using technology for assessments. Many reported that interactive tools fostered a more dynamic learning environment, encouraging students to participate actively. However, 25% noted that the change in engagement levels is not really increased. Not all students respond positively to technological integration.
5. Support Structure: The data reveals that about 75% of teachers received adequate technical support when implementing digital assessments. This support is crucial for overcoming challenges related to software glitches or connectivity issues. However, 25% experienced delays in receiving assistance, which could hinder their ability to conduct assessments smoothly.

In conclusion, the data illustrates a generally favourable perception among EFL teachers regarding the implementation of technology as an assessment tool. The majority recognize its potential to enhance assessment practices through increased engagement and effective feedback mechanisms. However, the presence of dissenting views highlights areas for improvement, particularly in terms of training and technical support. To maximize the benefits of technology in assessment, it is essential for educational institutions to provide comprehensive professional development programs that address both pedagogical strategies and technical skills. Additionally, ensuring robust technical support will help mitigate challenges faced by teachers during implementation.

Then, the following are the results of the interviews conducted between researchers with several teachers.

**Question 1: What challenges do you face when implementing technology as an assesment tool in your EFL classroom?**

*Teacher 1: Based on my experience, the lack of internet connection is the difficulty in using technology to assess students' work and also the lack of technical support in implementing technology get me quite confused.*

*Teacher 2: I face the challenges in implementing technology as an assesment tool such as: Time constraints prevent me from fully implementing technology-based assessments, limited classroom resouces, and the slow internet connection.*

*Teacher 3: The challenges that I face in implementing technology are time constraints, lack of technical support, and insufficient training or knowladge on using technology for assesment..*

*Teacher 4: The challenges are limited classroom resources such as projectors & smartboard, lack of access to devices, and lack of training in using technology.*

**Question 2: How do you manage situations when students face difficulties accessing technology?**

*Teacher 1: I chose a place that has a smoother internet signal so that there is no interruption of internet connection during the assessment process.*

*Teacher 2: I invited them to the computer laboratory and shared several sessions in my class hours, so that at least they had the experience of learning to use a computer that they had in their hands. And for assignments, I only give group assignments so that if someone has difficulty accessing technology, they can help each other with other student.*

*Teacher 3: When it is not possible for students to access technology, I usually try to prepare a plan B. Either find a place that allows it or change the assessment to be done offline.*

*Teacher 4: To minimize disruptions in the application of assessment using technology, I use simple technology that has been adequately prepared by the school.*

**Question 3: What types of technology do you use to assess students' work?**

*Teacher 1: I usually use online quiz platforms such as Kahoot or Quizizz and website that can give me the flashcard to assess students' vocabulary but I forget the name of it.*

*Teacher 2: I sometimes use virtual or video assesment such as recorded presentation that they have to upload to thier social media but I used online quiz platforms for the most*

*Teacher 3: Sometimes, I use paper-based assesment with online submission for example they have to submit their work to the google classroom or google form.*

*Teacher 4: I use interactive tools such as Padlet and Mentimeter and also Quizizz or Kahoot.*

The interview results reveal diverse perspectives on the challenges, strategies, and tools related to implementing technology as an assessment tool in EFL classrooms. Teachers face various obstacles, including inadequate internet connectivity, time constraints, limited classroom resources, and insufficient training or technical support. These challenges highlight the need for better infrastructure, professional development, and school-level support to ensure effective technology integration in assessments.

To address student difficulties in accessing technology, teachers adopt practical solutions such as conducting assessments in computer labs, using group assignments to foster collaboration, switching to offline assessments when necessary, and utilizing simple, school-prepared technology. These strategies underscore the importance of flexibility and creativity in overcoming barriers to technology use in education.

In terms of tools, teachers employ a mix of online quiz platforms like Kahoot and Quizizz, interactive tools such as Padlet and Mentimeter, and hybrid methods like paper-based assessments with online submissions through platforms like Google Classroom. Some teachers also integrate innovative methods, such as video assessments uploaded to social media, to engage students and diversify assessment formats.

In summary, the findings indicate that while technology-based assessments hold significant potential for enhancing teaching and learning in EFL classrooms, their successful implementation is contingent upon addressing key challenges. Schools must prioritize providing robust infrastructure, accessible technology, and ongoing training for teachers. Teachers' adaptability and creativity in managing these challenges demonstrate their commitment to leveraging technology effectively, ensuring inclusive and meaningful assessment experiences for their students.

## Discussion

This section focuses on discussion with two sub-topics: 1) How teachers' perception on implementation of technology as an assessment tool in EFL classroom; and 2) What are the challenges and the strategies in implementing technology as an assessment tool? The explanation is as follows:

### **A. How teachers' perception on implementation of technology as an assessment tool in EFL classroom.**

The survey data provides valuable insights into EFL teachers' perceptions of using technology in assessment practices, offering a nuanced understanding of its effectiveness, challenges, strategies, student engagement, and support structures:

- a) Effectiveness of Technology: The majority of teachers (75%) view technology as a tool that enhances the accuracy and efficiency of assessments, reflecting familiarity and confidence in its use. However, a minority (25%) do not perceive significant improvements, indicating that the effectiveness of technology may depend on individual experiences or contextual factors;
- b) Challenges in Implementation: Unstable internet connectivity, insufficient training, and a lack of classroom resources such as projectors and smartboards are major obstacles for 75% of the respondents. These challenges underscore the importance of addressing infrastructure and professional development to optimize technology use. Interestingly, a smaller group (25%) reported fewer difficulties, suggesting variations in resource availability and institutional support.
- c) Strategies to Overcome Challenges: All teachers (100%) employ strategies such as providing additional guidance to students, emphasizing the importance of preparation. Half of the teachers also collaborate with colleagues to share resources and adapt assessment tools for offline or low-connectivity use, demonstrating resourcefulness and teamwork in tackling implementation barriers.
- d) Student Engagement: Technology integration positively impacts student engagement for most teachers (75%), as interactive tools create a dynamic and participatory learning environment. However, a smaller proportion (25%) noted no significant changes in engagement, highlighting the need to consider individual student preferences and learning styles.
- e) Support Structures: Adequate technical support plays a crucial role in facilitating

technology-based assessments, with 75% of teachers benefiting from timely assistance. Conversely, 25% faced delays in support, which could disrupt their ability to conduct smooth and efficient assessments.

The findings underscore that while technology has the potential to improve assessment practices in EFL classrooms by enhancing accuracy, engagement, and efficiency, its implementation is not without challenges. Teachers' strategies, such as offering guidance, collaboration, and adapting tools, highlight their resilience and adaptability. However, addressing infrastructural shortcomings, ensuring reliable technical support, and providing consistent training are essential to maximize the benefits of technology in assessments. Tailoring approaches to accommodate diverse student needs and teacher contexts can further enhance the effectiveness of digital assessment practices.

#### **B. What are the challenges and the strategies in implementing technology as an assesemen tool**

The interview results provide rich insights into the challenges faced by EFL teachers when implementing technology as an assessment tool, along with their strategies for managing student difficulties in accessing technology.

##### **1. Challenges in Implementing Technology for Assessment**

The responses from teachers highlight a range of challenges, reflecting the complexities of integrating technology into assessment practices in EFL classrooms.

- a. Internet connectivity issues: Several teachers emphasized the recurring problem of unstable internet connections, which significantly disrupt the smooth conduct of technology-based assessments. Teacher 1 specifically noted how this issue creates difficulties in assessing students' work, while others also mentioned this as a barrier to effective implementation.
- b. Limited classroom resources: The lack of adequate resources, such as projectors, smartboards, and student access to devices, emerged as a common challenge. Teacher 2 and Teacher 4 specifically pointed out the limitations in classroom equipment, which hinder the full potential of technology in assessments.
- c. Time constraints: Teachers 2 and 3 identified time constraints as a significant obstacle. The additional preparation time required for setting up technology-based assessments often clashes with their existing workload, making it difficult to utilize these tools effectively.
- d. Insufficient training and technical support: Another major challenge is the lack of sufficient training and technical support. Teachers 1, 3, and 4 all noted confusion or difficulty stemming from inadequate knowledge or support in using technology. Without proper training, the implementation process becomes burdensome, limiting the effectiveness of digital assessments.

##### **2. Managing Student Difficulties in Accessing Technology**

The teachers demonstrated adaptability and creativity in addressing student challenges related to accessing technology.

- a. Optimizing internet access: Teacher 1 highlighted the importance of selecting locations with better internet connectivity to minimize disruptions during assessments. This approach reflects an effort to mitigate external technological barriers.
- b. Utilizing available facilities: Teacher 2 shared an innovative solution of utilizing the computer laboratory during class hours to familiarize students with



technology. This proactive strategy not only resolves immediate access issues but also equips students with essential digital skills. Additionally, assigning group tasks allows students to collaborate and support peers who may face individual access challenges.

- c. Preparing backup plans: Teacher 3 emphasized the importance of flexibility by preparing "plan B" options, such as conducting offline assessments when technology is inaccessible. This approach ensures the continuity of assessments while addressing access-related barriers.
- d. Using simple, pre-prepared technology: Teacher 4 opted for simple technological tools provided by the school, minimizing disruptions and complexity. This pragmatic approach ensures that students and teachers can focus on the assessment content rather than navigating complicated technology.

The findings underscore the dual nature of integrating technology into EFL assessment practices: while it offers opportunities for innovation and efficiency, it also presents significant challenges. Key barriers include unstable internet connectivity, limited resources, time constraints, and insufficient training and technical support. Addressing these issues requires institutional investment in infrastructure, professional development programs, and accessible technical support. Teachers have shown remarkable adaptability in managing these challenges, employing strategies such as utilizing alternative locations, leveraging school facilities, preparing contingency plans, and simplifying technological tools. Their efforts ensure that assessments remain accessible and effective despite existing limitations.

In conclusion, while technology-based assessments hold immense potential, their success relies on addressing infrastructural and training gaps. Teachers' resourcefulness and commitment to student engagement underscore the importance of supporting educators in their efforts to integrate technology into the assessment process. This can pave the way for more equitable and efficient EFL assessment practices.

Teachers' perceptions of technology for assessment can be explained through several well-established educational and technology adoption theories. According to Davis (1989), in the Technology Acceptance Model (TAM), individuals are more likely to adopt a technology when they perceive it as useful (perceived usefulness) and easy to use (perceived ease of use). In the context of English as a Foreign Language (EFL) assessment, teachers who believe that digital assessment tools improve assessment efficiency, accuracy, and feedback quality are more likely to integrate them into their teaching practices. This perspective is supported by Venkatesh et al. (2003) through the Unified Theory of Acceptance and Use of Technology (UTAUT), which argues that technology adoption is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions. Thus, teachers' positive or negative perceptions are shaped not only by the features of the technology itself but also by institutional support, training opportunities, and the availability of technological infrastructure.

From an educational perspective, Black and Wiliam (1998) emphasize that assessment should function as an integral part of the learning process by providing continuous feedback that supports students' learning progress. Technology-enhanced assessment enables teachers to deliver immediate feedback, monitor student performance more efficiently, and make data-driven instructional decisions. Furthermore, Nicol and Macfarlane-Dick (2006) argue that effective feedback promotes self-regulated learning by helping students identify their strengths and weaknesses. Digital assessment platforms facilitate this process through automated scoring, instant feedback, and learning analytics, thereby enhancing both teaching effectiveness and student engagement.

The integration of technology in language assessment is also consistent with Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) framework, which states that effective technology implementation depends on teachers' ability to integrate technological knowledge with pedagogical and content knowledge. Therefore, EFL teachers' perceptions of technology for assessment are influenced not only by their digital competence but also by their pedagogical understanding of how technology can support valid, reliable, and meaningful assessment practices. Consequently, teachers with stronger TPACK competencies tend to demonstrate more positive perceptions and greater readiness to adopt technology-based assessment in EFL classrooms.

## CONCLUSION

The research highlights that technology offers diverse assessment formats, enabling teachers to cater to different learning styles and needs, thus enriching the educational experience. However, concerns regarding the reliability of online assessments and the integrity of student submissions persist, particularly in remote learning environments. These challenges underscore the necessity for ongoing professional development and support for educators to navigate the complexities of integrating technology into their assessment practices effectively. In conclusion, this research has provided valuable insights into teachers' perceptions regarding the implementation of technology as an assessment tool in English as a Foreign Language (EFL) classrooms. The findings indicate that while many EFL teachers hold positive attitudes towards the use of technology for assessments, recognizing its potential to enhance student engagement and streamline evaluation processes, significant challenges remain. Issues such as inadequate training, limited access to resources, and varying levels of technological proficiency among students can hinder effective implementation.

## REFERENCES

- Astiandani, F., & Anam, S. (2021). EFL Teachers' Perceptions Towards the Implementation of Online Formative Assessment Amidst the Covid-19 Pandemic. *Journal of English Language Teaching*, 8(2), 269–277.
- Bahrani, T. (2011). Technology as an Assessment Tool in Language Learning. *International Journal of English Linguistics*, 1(2), 295–298. <https://doi.org/10.5539/ijel.v1n2p295>
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74. <https://doi.org/10.1080/0969595980050102>
- Burns, A. 1999. Collaborative Action Research for English Language Teachers. London: Cambridge University Press.
- Calvin, Y., & Mali, G. (2023). The Exploration of EFL Teachers' Technological Practices in Indonesian Schools. *Journal of English Teaching and Learning Issues*, 66(22), 153–168. <https://doi.org/10.21043/jetli.v6i2.22298>
- Cao, Y., Said, M. N. H. M., & Hanid, M. F. A. (2025). *The Effect of WeChat on Promoting Foreign Students' Chinese Language Learning: A Systematic Literature Review*. International Journal of Instruction.
- Creswell, JW; Poth, C. (2017). *Qualitative Inquiry & Research Design: Choosing among Five Approaches* (4th ed.). Sage Publications
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Eryansyah, E., Erlina, E., Fiftinova, F., & Nurweni, A. (2019). *EFL students' needs of digital literacy to meet the demands of 21st century skills*. Indonesian Research Journal in Education, 3(2), 442–460.

- Fitriyah, I., & Jannah, M. (2021). Online Assessment Effect in EFL Classroom: An Investigation on Students and Teachers' Perceptions. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 5(2), 265. <https://doi.org/10.21093/ijeltal.v5i2.709>
- Jamshed, M., Alam, I., Almashy, A., & Warda, W. U. (2024). *Assessing Saudi learners' engagement with social media in English classrooms*. *International Journal of Instruction*.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Mollaei, F., & Riasati, M. J. (2013). Teachers' perceptions of using technology in teaching EFL. *International Journal of Applied Linguistics and English Literature*, 2(1), 13–22. <https://doi.org/10.7575/ijalel.v.2n.1p.13>
- NAEP (2018). *Digitally Based Assessments*. Retrieved January 31, 2019, from <https://nces.ed.gov/nationsreportcard/dba/>
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199–218. <https://doi.org/10.1080/03075070600572090>
- Pardede, P. (2020). Secondary School EFL Teachers' Perception of ICT Use in Learning and Teaching: A Case Study in Greater Jakarta. *JET (Journal of English Teaching)*, 6(2), 144–157.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Wenny, N, Tenri., Parenreng, M, Jumadi., Suhartono. (2022). Development of Lecture Attendance System Using QR Code in Information and Computer Engineering Education Study Program of Universitas Negeri Makassar. *ELINVO (Electronics, Informatics, and Vocational Education)*. 7(1), 19-26.
- Wicaksono, A. L. (2022). Teachers' Perceptions Towards the Practice of Assessment in Online Classroom During Pandemic of Covid-19. ... *Journal: International Journal of Education ...*, 2(4), 211–218. <https://journal.unesa.ac.id/index.php/elite/article/view/19762>