# HARNESSING ICT FOR ENGLISH LANGUAGE LEARNING IN INDONESIA: CHALLENGES AND OPPORTUNITIES

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| Article Info | Abstract |
|---|---|
| | During the COVID-19 pandemic, online learning became mandatory, leading to the use of various apps, tools, and teaching methods to ensure the learning process continued. This systematic review examines the impact of implementing ICT in English Language Learning, specifically for students in school settings during the pandemic. The review included 87 studies based on exclusion/inclusion criteria. The findings from this literature review revealed that ICT practices in English language teaching resulted in positive outcomes, with 91% of the studies reporting improved language skills. Digital tools, multimedia, and visual aids enhanced student motivation, comprehension, and engagement, although some challenges were encountered. Integrating ICT tools like Zoom, Google Meet, Microsoft Teams, and Google Classroom became essential in education during and post-pandemic. Synchronous and asynchronous learning and communication tools like WhatsApp and Telegram proved effective for English language learning. Visual-based tools and multimedia content, including YouTube and animations, significantly improved language skills and created an engaging learning environment. However, challenges such as digital access inequity, technical competencies, lack of personal connection, pedagogical adaptation, and health-related concerns need to be addressed for effective and inclusive future implementation in English Language Learning. |

## INTRODUCTION

In the current educational setting, English language teaching methods are aligned with specific curricula and aim to prepare students through creative, effective, and practical approaches (Kizi et al., 2020), including integrating information technology. Information technology has been proven to enhance engagement and effectiveness in English language teaching (Gilakjani & Sabouri, 2017). Information technology brings many new perspectives on teaching aids that can potentially improve current methods, utilizing various media forms, i.e. text, images, graphics, audio, video, and animation, to enhance comprehension and retention (Alobaid, 2021; Guan et al., 2018).

During the COVID-19 pandemic, information technology immensely helped the learning process, as conventional learning systems could not be conducted offline at schools, universities, and educational institutions (Soon & Abdul Aziz, 2022). The pandemic has significantly disrupted teaching and learning activities worldwide. Teachers and students had to adapt quickly to online learning in response to the pandemic. Despite various challenges, limitations, and the unpreparedness of multiple parties, which in some cases caused mental health issues for teachers and students, as stated by Sahu (2020), online learning was mandatory, and this sudden shift from traditional classroom settings to fully online learning significantly impacted all parties' preparedness (Hodges et al., 2020; Nartiningrum & Nugroho, 2021). Teachers' limited or lack of in-depth pedagogical knowledge in technology integration, virtual experiences, and online instruction made the sudden shift to remote teaching and learning an extremely difficult, stressful, and challenging task (Gomez et al., 2022; Hodges et al., 2020).

Despite the challenges in creating diverse teaching experiences, their efforts have yielded positive outcomes. Students engage in various virtual learning activities, such as watching videos, completing quizzes, doing assignments (Gomez et al., 2022), and participating in discussions via platforms like Google Meet or WhatsApp (Lina & Hidayati, 2022). These activities, tailored to the class design, ultimately enhance students' English language skills and learning abilities (Ahmad et al., 2022).

According to Mazlan et al. (2021) and Nugroho et al. (2021), Students' low motivation is another major challenge in a complete online learning system, such as during the pandemic, which monotonous teaching methods employed by teachers mainly cause. Therefore, teachers need to carefully design the online learning experience, considering students' comfort with technology and teaching aids, their technical proficiency, as well as their time and other factors (Haryati et al., 2021; Nartiningrum & Nugroho, 2021; Nugroho et al., 2021). Research on the

effective use of information technology and teaching aids in teaching English for schools in the Indonesian context is still quite limited, especially during the Pandemic.

This research paper aims to explore the effectiveness of ICT in English language learning during the Pandemic era (2020-2022) and what can be done for future learning post-pandemic through the following research questions:

1. What are the trends of studies on ICT implementation in schools during the pandemic in relation to students' English language skills between 2020 and 2022?

2. Does using ICT in schools during the pandemic impact the development of student's English language skills?

3. Which specific ICT tools significantly impact the development of student's English language skills?

4. What challenges are encountered in implementing ICT to develop student's English language skills?

## REVIEW OF LITERATURE

### The Evolution of ICT

The term "ICT" started to be commonly used in the 1990s, when education began to use Internet and computer technology practices in the teaching and learning process in formal settings. ICT stands for information and communication technology, is defined as the activities of using a diverse set of technological tools and resources, including computers, the Internet, broadcasting technologies, and telephony, to transmit, store, create, share, or exchange information (The UNESCO Institute for Statistics, 2009). It began with the development of CALL (Computer Assisted Language Learning) (Alzahrani, 2017; Levy, 1997), followed by MALL (Multimedia Application Language Learning), RALL (Robot-Assisted Language Learning) (Hong et al., 2016), and TELL (Technology-Enhanced Language Learners) focusing more on Language Learning (Zainuddin, 2023).

### Opportunities and Challenges of ICT in Language Learning

The use of technology has presented both opportunities and challenges for teachers and learners. The increased utilization of information and communication technology (ICT) has significantly impacted the teaching and learning languages, including English (Yermekkyzy, 2022; Zainuddin, 2023). The benefits of ICTs in language learning are widely recognized, although caution is exercised in some instances (Alobaid, 2021; Hidayati, 2016)). In developing countries, ICTs are often viewed as an empowering tool that provides people with access to previously unavailable opportunities and choices. However, using gadgets and devices in the

English language teaching and learning context is only seen as an early rise in most developing countries (Altun & Khurshid, 2021). The influence of gadgets and devices such as computers, televisions, overhead projectors, mobile phones, multimedia tools, and internet-based applications in language education is undeniable. These technologies significantly enhance the quality and relevance of language instruction. (Richards, 2015a) notes that many educators in urban areas have begun integrating various technologies into their classrooms. This trend underscores a growing shift towards adopting Information and Communication Technology (ICT) in language education, a shift made possible using digital devices.

**The Effect of ICT Implementation in ELT**

The integration of ICT in English Language Teaching (ELT) is often accomplished through implementing a blended learning approach, which combines traditional face-to-face classroom instruction with online e-learning components. Various research studies have highlighted the advantages of blended learning in ELT. These benefits include providing additional learning opportunities and flexibility outside the classroom, fostering students' autonomy and collaborative learning (Chowdhury, 2021). Blended learning has also been found to accommodate different learning styles (Pardede, 2012), enhance learning efficiency (Wang et al., 2009), and increase students' cooperation, motivation, and communication skills (Buran & Evseeva, 2015; Chowdhury, 2021). Shishkovskaya et al. (2015) studied the effectiveness of web 2.0 tools, including SlideShare, YouTube, Podcasts, Flickr, and Picasa, in enhancing students' English proficiency in higher education settings. Cavus et al. (2007) also found that collaborative learning tools can lead to successful language-learning activities.

From the teacher's perspective, while many teachers have expressed a positive attitude and strong belief in the benefits of integrating ICT in ELT classrooms, challenges still exist in the implementation. These challenges are primarily caused by ICT facilities, training, technical support provided by educational institutions, and teachers' low self-efficacy with ICT. Conflicts may also arise in the integration process due to educational policies and curriculum guidelines concerning ICT adoption (Alobaid, 2021; Yermekkyzy, 2022).

Despite these challenges, most studies highlight the positive perspectives of teachers regarding ICT integration in teaching and learning. Various factors such as institutional support, social factors, facilities, beliefs, understanding, attitudes, and ICT practices have been explored concerning teachers' perspectives. The majority of research recommends the use of ICT in language teaching and learning contexts. It emphasizes the importance of ICT training to

enhance teachers' professional development (Seenivasan, 2024), particularly in preparing students for 21st-century English language competency.

**METHOD**

This study used the Systematic Literature Review (SLR) methodology, which provides a comprehensive and synthesized overview of existing research on a specific topic (Snyder, 2019). Unlike traditional narrative reviews, SLR goes beyond summarising literature and instead focuses on identifying knowledge gaps, providing a rationale for further investigation (Denney & Tewksbury, 2013). SLR differs from traditional narrative reviews in adopting replicable, scientific, and transparent producers. It helps to collect all related publications and documents that fit our predefined inclusion criteria to answer a specific research question (Mengist et al., 2020).

The systematic nature of the review ensures that all relevant studies are identified through a well-defined search strategy, and rigorous criteria are applied to assess their quality and relevance. By synthesizing the findings from multiple studies, the SLR offers a more robust and comprehensive understanding of the research topic, enabling researchers to make evidence-based conclusions and recommendations (Grant & Booth, 2009).

Moreover, the SLR methodology allows for transparency and replicability, as it follows a predefined protocol and explicitly outlines the steps taken in the review process (Xiao & Watson, 2017). This ensures that other researchers can replicate and verify the study, adding to the credibility and trustworthiness of the findings. Once the research questions were formulated, a review protocol was created to guide the search for relevant studies.

**Data Collection**

The objective of this step in this systematic review was to employ relevant databases to identify the most appropriate sources. Data collection occurred between 16 June 2023 and 1 July 2023, focusing on databases in SAGE Publication, Google Scholar, ERIC, and Garuda (Garba Rujukan Digital). These databases were chosen due to their extensive collection of education-related research articles. Garuda, in particular, was selected because the topic of discussion is primarily in the Indonesian context, and it is more likely that the authors would publish in Indonesian-based journals.

Table 1 displays the selected set of research terms that were selected & utilized to ensure suitable results in both English and Indonesian languages. The search terms used in those databases included "ICT, English skills, Indonesia," "ICT, pandemic, and Indonesia," and "ICT, Bahasa Inggris, Indonesia," as well as "ICT, Bahasa Inggris, Pandemi, Indonesia." The

latter was used in the Garuda database and Google Scholar, while the English manuscripts were used in ERIC and SAGE Publication. Of the results returned, only research studies and article papers between 2020 and 2023 were taken into account.

**Table 1. Research Terms That Were Selected & Utilized in This Research**

| ICT | And | English Skills | And | Indonesia | And | Pandemic |
|---|---|---|---|---|---|---|
| Or | | Or | | Or | | Or |
| **Digital** | | Listening Skills | | Schools | | *Pandemic* |
| **Technology** | | Reading Skills | | *Sekolah* | | |
| *Teknologi* | | Speaking Skills | | *SD/SMP/SMA* | | |
| *Internet* | | Writing Skills | | | | |
| | | *Bahasa Inggris,* | | | | |
| | | *Kompetensi* | | | | |
| | | *Bahasa Inggris* | | | | |

## Criteria

Including and exclusion criteria limit a systematic review, which sets boundaries to the parameters and the study. These criteria are typically defined after formulating the research question. This study sets specified inclusion and exclusion criteria in Table 2.

**Table 2. Specified criteria for inclusion and exclusion**

| Criteria | Details |
|---|---|
| Inclusion Criteria | • The studies were conducted in Indonesia.<br>• The studies focused on Information and Communication Technologies (ICT).<br>• The studies focused on Elementary to Senior High School Settings.<br>• The studies focus on students' English Skills, individually or in general.<br>• The studies were published between 2020 and 2023, focusing on the pandemic.<br>• The studies were from peer-reviewed journal publications. |
| **Exclusion Criteria** | • The studies were not conducted in Indonesia.<br>• The studies did not focus on Information and Communication Technologies (ICT) in Education.<br>• The studies did not focus on students' English Skills.<br>• The studies focused on educational settings beyond Senior High Schools (such as Universities/Colleges).<br>• The studies were published before the year 2020.<br>• The studies were not from peer-reviewed journal publications. |

Using the PRISMA checklist below (Figure 1), the search method resulted in 2112 articles. After removing duplicates, the number was reduced to 1119. Screening the records resulted in the exclusion of 694 articles, leaving 425 full-text articles. Applying the previously mentioned inclusion/exclusion criteria to these articles led to the exclusion of 332 studies. Ultimately, the screening method resulted in 94 studies to be analyzed, with 87 final records for in-depth analysis.
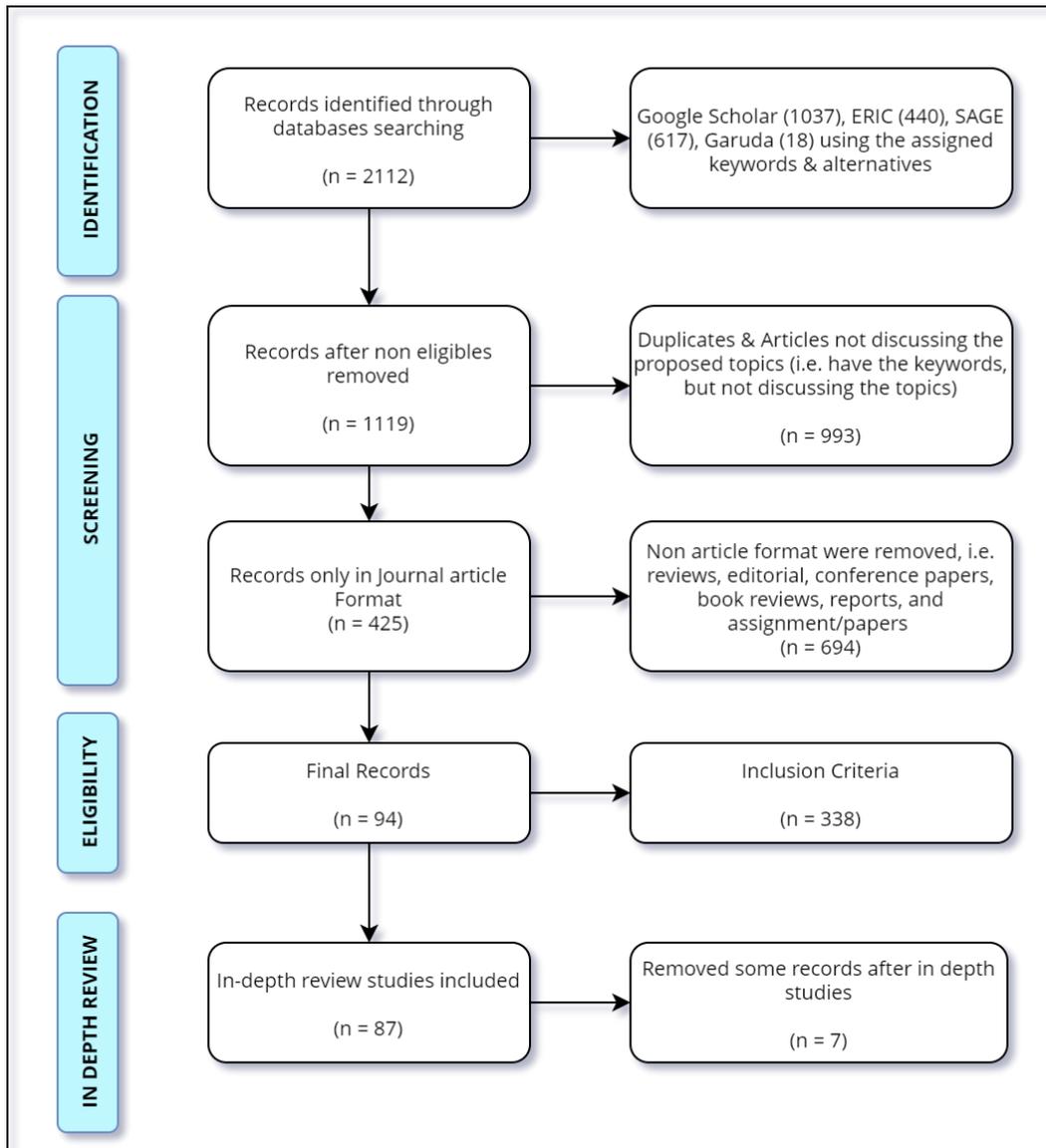
**Figure 1**: **Prisma Checklist Flow Diagram**

## RESULTS AND DISCUSSIONS

### Findings

*Article Published by Year*

Number of articles published by year of publication is presented in Figure 2. Figure 2 shows that between 2020 and 2022, the articles were primarily published in 2021. This is likely to happen because the writers experienced teaching online during the pandemic in 2020 and found an empirical gap between reality (evidence) and theory (theoretical) regarding asynchronous learning topics and the utilization of information technology in teaching English, which must be done online.
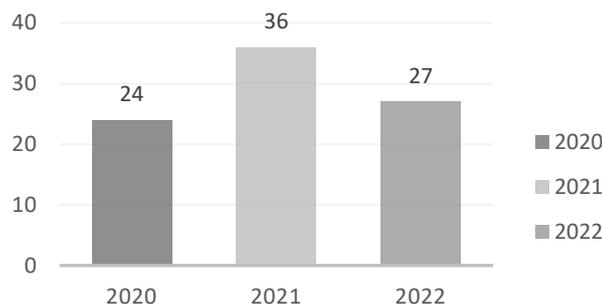
**Figure 2: Number of Articles published by year**

### Article Scope Published by Year of Publication

Table 3 presents the scope of the journal, published by year of publication. Table 2 shows that 41,3% (or 36 articles) were published in 2021, followed by 31% (or 27 articles) published in 2022.

**Table 3. Scope of the journal, published by year of publication.**

| Scope | 2020 | 2021 | 2022 |
|---|---|---|---|
| Local | 23 | 34 | 25 |
| International | 1 | 2 | 2 |
| Total | 24 | 36 | 27 |

### The Language Used in Publication

The language used in the articles is still predominantly Indonesian, with 68 articles (78%) written in Indonesian, while the remaining 22% are in English, as shown in Figure 3. No other languages were found in the records collected for review.
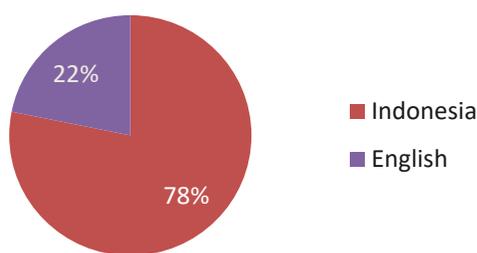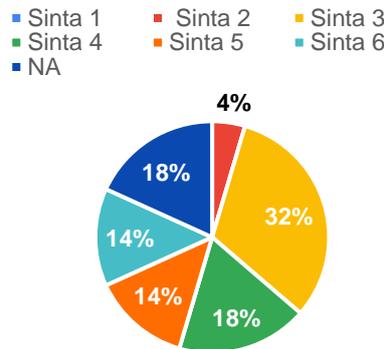


**Figure 3: Composition of Published Articles Based on Language Used**

### Publication of Articles in National Journals

Figure 4 illustrates the comparison of published articles based on the accreditation of publisher journals with the national scope of SINTA (Science and Technology Index). 32% or 26 manuscripts were published in journals with SINTA 3 accreditation, followed by journals with

SINTA 4 reputation index. There are 15 articles, approximately 18%, published in journals without SINTA index.



**Figure 4: Composition of Published Articles Based on Publisher Journal Index**

*Publication of Articles in International Journals*

Figure 5 shows that of the six articles published in international journals, two were published in journals with the Scopus Q2 index. In comparison, the remaining three articles were included in journals with the Scopus Q4 index.
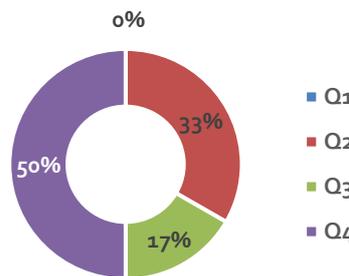


**Figure 5: Composition of Published Articles Based on Scope of Journal**

*Number of Authors*

According to Table 4, most of the journals in National Journals are written by two authors (31 records, 31,5%), followed by three authors (21 records, 24%). For International journals, two out of five records were written by two authors, and more than three authors wrote two articles.

**Table 4**. **Number of Authors for the published journals.**

|  | 1 Author | 2 Authors | 3 Authors | >3 authors |
|---|---|---|---|---|
| **National** | 18 | 31 | 21 | 17 |
| **International** | 0 | 2 | 1 | 2 |
| **Total** | 18 | 33 | 22 | 19 |

*School Levels*

According to Figure 6, most research focused on the high school level, with 27 articles (30%) conducted in that context. This was followed by the elementary school level, which had 23 research articles (26%).
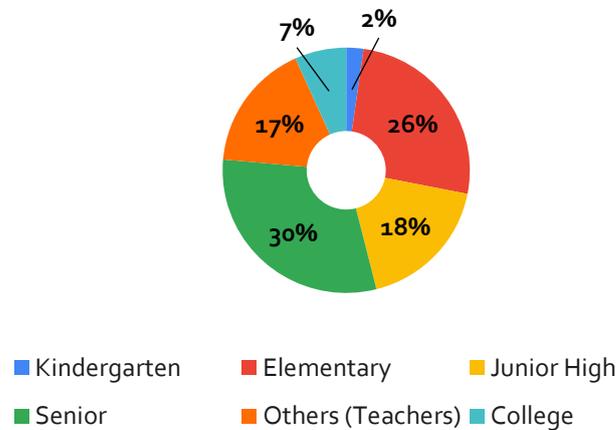


**Figure 6:  Composition of Published Articles Based on Level of Schools**

*Areas of Expertise Focus*

Based on Figure 7, most research focused on English language skills in general, with 27 articles (30%) dedicated to this area. This was followed by research focusing on speaking skills, with 22 articles (25%), and vocabulary skills, with 12 articles (13%).
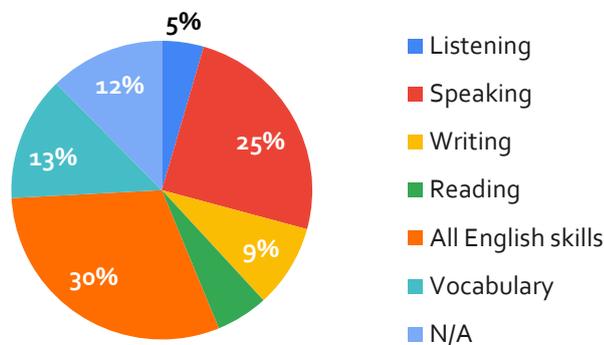


**Figure 7:  English Skill Focus**

*ICT (Information and Communication Technology) Utilized*

Figure 8 shows that most digital communication media were not used individually but rather in combination with other media. For example, combinations like YouTube with WhatsApp or Zoom with PowerPoint were commonly used. Google Classroom and Zoom/Google Meet dominated as the single ICT media used, each accounting for 15%. This was followed by WhatsApp/Telegram at 11% and YouTube channels at 11%—figure 8.
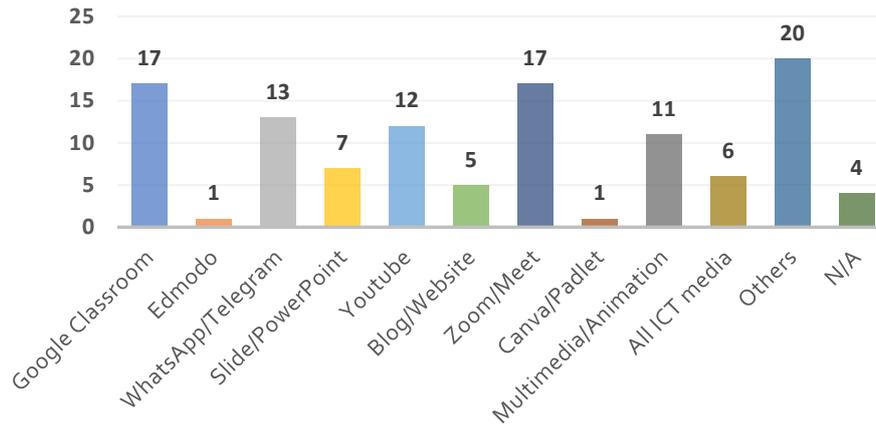
**Figure 8: Published Articles Based on The Modality of ICT Utilized**

The "Others" category indicates the use of other ICT media not explicitly mentioned, such as Instagram, Powtoon, Twitter, custom applications, StrongJumper, and Google Sites, as well as the utilization of visual teaching aids and realia displayed on the laptop screen or projector in the classroom.

## *Results of ICT (Information and Communication Technology) Utilisation*

Based on Figure 9, it is evident that the results of ICT utilization have shown positive outcomes for the development of student's English language skills, with 91% reporting success in improving students' abilities. However, eight articles (9%) did not explicitly explain the progress or improvement of skills.
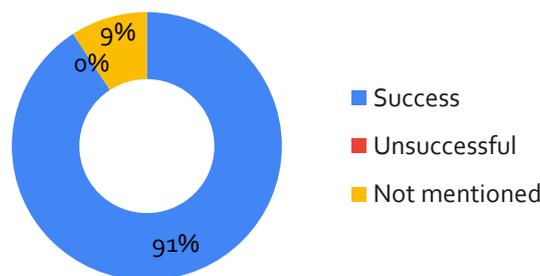


**Figure 9:  Composition of Published Articles Based on The Result**

## Discussion

### *Trends of Studies on ICT Implementation in Schools During the Pandemic in Relation to Students' English Language Skills Between 2020 and 2022*

*Journal Reputation*

The "article published by year" section in Table 2 highlights that most of the research was published in 2021. In the year 2020, when the pandemic began, the sudden shift from

conventional teaching to online-based teaching caused significant changes in the teaching and learning process and the use of technology and teaching aids. These changes prompted teachers to seek creative methods in their teaching and ultimately encouraged them to explore various technology-based teaching approaches. With limited mobility due to the Implementation of Community Activity Restrictions (PPKM) in 2020-2021 and the free availability of internet access using cellular or Wi-Fi broadband throughout early to late 2020, it may have motivated some teachers to conduct research on the teaching methods they used in 2020 and publish them in 2021.

Only 32% (26) of the total reviewed articles were successfully published in Sinta 3 index reputation journals. No articles were recorded in journals with Sinta 1 reputation, and only 4 (4%) were published in Sinta 2. This data highlights the difficulties authors face in meeting the high standards required by higher index journals, potentially due to language barriers (English) and lack of experience in standardized scientific writing.

A total of 18% (15 articles) were published in journals that have not yet been accredited in national reputation journals. The remaining five journals were published in Scopus Indexed Journals. Two articles (Mandasari et al., 2022; Tinungki & Nurwahyu, 2020) were published in Q4 journals, one article got published in a Q2 journal (Reflianto et al., 2021), and one article (Rasmitadila et al., 2020) Despite the challenges, some articles were successfully published in Scopus-indexed journals, including Q1 and Q2 journals. This success points out the potential for conducting and writing high-quality research to be acknowledged at an international level, offering a promising outlook for the future of academic research.

*Language Barriers*

Language barriers and a lack of knowledge in scientific journal writing are likely to be the main obstacles for most authors, predominantly teachers and educators at the elementary and secondary education levels. Approximately 78% of the analyzed journals in this study were written in Indonesian, indicating that language proficiency remains a significant barrier for many authors. Although the research object was mostly Indonesian schools and students, the quality of the research should also be considered as best practice or an example capable of contributing to academic society worldwide. This limitation affects their ability to publish in high-reputation international journals and share their findings with a broader audience.

Additionally, limitations in funding, time, and the difficulty of finding suitable references that meet international standards are significant factors hindering publication in reputable international journals. Constraints in accessing information and literature sources are also suspected to be barriers for authors in writing journals and developing their ideas. The lack of

motivation to publish in high-quality journals is also believed to be why authors opt for journals with medium and low reputations.

*Collaboration in Research*

Regarding collaboration, the number of articles dominated by two authors (31 articles, 31.5%) indicates that authors are open to collaborating with other writers. Collaborative writing offers the opportunity to merge different perspectives, ideas, and expertise from each author (Lingard, 2021). Collaborative writing is also seen as a way to produce higher-quality writing and enhance language fluency through collective efforts to ensure accuracy, clarity, and coherence, including language proficiency (Fernández Dobao, 2012; Pham, 2021). However, differences in opinions, ideas, and approaches can sometimes occur in a collaboration, requiring extra effort to maintain it. Unequal workload might also occur, with some authors contributing more than others, which may cause dissatisfaction among authors. Finally, authorship order and credit for contribution can be complex in multi-author collaboration. Clear agreements and transparency are essential to avoid disputes over collaboration research projects.

*Focus Areas in Research*

Most research focused on the high school level, with 27 articles (30%) conducted in that context. This was followed by the elementary school level, with 23 research articles (26%). Most research focused on English language skills, with 27 articles (30%) dedicated to this area. This was followed by research focusing on speaking skills, with 22 research articles (25%), and vocabulary skills with 12 articles (13%). High schools are a significant research focus as, at this level, students begin to recognize the importance of English for their future careers and education.

At the high school level, students are considered capable of accepting various experimental technology-based teaching methods and reflecting on the feedback from the teaching process. During the pandemic, many explorations of information technology were used to support English language learning activities, including the use of YouTube as a learning media platform (Meinawati et al., 2020; Nurjanah & Prastowo, 2021; Rasman, 2021; Wahyuningsih et al., 2022), Google Earth (Sadikin et al., 2022), video media or visual-based multimedia (Maulidya et al., 2021; Maru et al., 2020), Google Classroom (Siahaan et al., 2022; Zakiah et al., 2020), Zoom & Google Meet (Mandasari et al., 2022; Tinungki & Nurwahyu, 2020), as well as unique or custom-built applications and Social Media apps (Ayu & Sari, 2022; Wahyudin et al., 2020).

The pandemic has pushed the exploration of ICT tools from the educator's side to innovate and utilize various media forms in classroom practices. This exploration has likely led to more dynamic, creative, interactive, and engaging learning environments, benefiting both teachers

and students, even when the pandemic is over. However, while platforms like YouTube and Google Classroom offer significant benefits, they may not be equally effective for all students. Tailoring these tools to meet individual learning needs in a large classroom/with students with different interests and needs can be complex and time-consuming for the teachers. Teachers' capability to learn using these tools effectively and adjusting to the syllabus/teaching plan may raise new concerns.

*English Language Skills*

English language proficiency at the high school level is considered essential because English language proficiency is a primary standard in English assessment. Students must be proficient in English to understand and effectively communicate in their scientific fields. Since a significant portion of scientific literature is in English, proficiency enables students to access and comprehend scientific resources efficiently. Indonesian universities also integrate English language learning into their curricula to prepare students for the global job market. The aim is to develop students who are experts in their respective fields and fluent in English communication (Andayani, 2022).

Speaking skills are prioritized in English language learning because speaking is considered the most challenging and productive skill and reflects one's fluency in English. Vocabulary mastery supports English fluency, especially speaking skills (Bayar & Karaduman, 2021; English First, 2023).

Primary schools are the first educational institutions in Indonesia to introduce English language education formally. About 26% of the research focuses on the primary school level, indicating significant attention to English language teaching methods for elementary school students, especially during the pandemic. Various limitations teachers and students face have prompted teachers to actively seek ways to teach English to elementary school students using information technology-based approaches. (Auliya et al., 2022; Adzkiya & Suryaman, 2021; Fatmawati, 2021; Fitriya et al., 2022; Marzal, 2014; Mu'awanah et al., 2021; Nurjanah & Prastowo, 2021; Rahmasari, 2022; Santika et al., 2021; Sari & Arini, 2021; Susanti & Prameswari, 2020; Soeharyono et al., 2022).

***The Use of ICT in Schools During the Pandemic and its Impact on Student's English Language Skills***

Figure 9 above shows that implementing ICT has yielded positive results in developing students' English language skills. A total of 91% reported success in improving students' abilities. However, eight articles (9%) did not provide detailed explanations regarding explicit progress or improvement of skills. The observed developments include motivating students and

facilitating a faster (and better) understanding of English language learning, as mentioned by Aslihah et al. (2021) and Gamayanti & Marzuq (2021) There is also an excitement in learning English after receiving new teaching methods, perceived as a more enjoyable method compared to previous conventional methods (Firmansyah et al., 2021; Hadi et al., 2020; Mahsunah, 2021). Despite the overall success, other factors such as access to technology, teacher training, and student familiarity with digital tools can influence the effectiveness of ICT in language learning.

ICT implementation also facilitates students' expression of themselves using the vocabulary they have learned in English (Agustin & Ayu, 2021; Handayani, 2020; Rokhman & Ahmadi, 2020). Research by Yermekkyzy (2022) also demonstrates that using ICT in the classroom provides numerous benefits for students and teachers who teach English. Richards (2015) emphasizes using pictures in classrooms as visual aids to engage the collective attention of the students. Meanwhile, the use of digital Visual Aids has significantly aroused the learners' interest (Ahmed, 2018).

Although there are many positive outcomes for the teachers and the students from using ICT as teaching aids in the classroom, access to technology becomes one primary issue in implementing ICT in the classroom. Not all students and schools may have equal access to the necessary technology and internet connectivity, which can create disparities in learning opportunities and outcomes. Besides, students' familiarity and comfort with digital tools can influence their ability to benefit from ICT implementation in the classroom or a general learning context. Students who are less comfortable and have not really adapted well to technology may struggle to adapt to new teaching methods (Hidayati, 2022).

### *Specific ICT Tools that Have a Significant Impact on the Development of Student's English Language Skills*

After a thorough review of the journals, it is apparent that information technology has become *Multimodality*. Some tools or apps cannot be separated from each other and can be used in conjunction with other apps. Some ICT tools or apps are used together because they serve different purposes. Zoom Meetings/Google Meet/Microsoft Teams are the most commonly used tools (15%), followed by Google Classroom (15%) and communication tools like WhatsApp/Telegram. Zoom Meetings, Google Meet, and Microsoft Teams function to support online live learning activities, which were predominantly used during the remote learning period of the COVID-19 pandemic. Google Classroom is a helpful tool for asynchronous learning processes. WhatsApp/Telegram functions as a communication platform that bridges students, classes, and teachers through WhatsApp/Telegram Groups. During the pandemic, the combination of synchronous learning using Zoom/Google Meet/Teams, asynchronous learning

using Google Classroom, and quick communication through WhatsApp and Telegram were considered highly effective in assisting students in learning English skills amidst the chaos of the pandemic and the mental pressure caused by mobility restrictions and high mortality rates (Fernandez et al., 2022; Mandasari et al., 2022). Some of those tools/apps have now become the new normal in learning and teaching in many areas at education levels in Indonesia, i.e., Google Classroom with Zoom meetings and WhatsApp Group.

The use of visual-based tools and teaching aids, including videos and other multimedia content, is believed to be highly beneficial in English language learning during the pandemic. The use of YouTube, multimedia, and animations has been reported to have a significant impact on improving students' English language skills in schools in Indonesia during the pandemic (Handayani, 2020; Meinawati et al., 2020; Nurjanah & Prastowo, 2021; Rasman, 2021). Research by Saed et al. (2021) also confirms significant progress in the speaking performance of students exposed to the YouTube experiment. Research by Ahmed (2018) states that visual teaching aids facilitate students' understanding and development of their English language skills and contribute to classroom setting and management. Using appropriate and well-designed visual aids also supports teachers' teaching styles and students' learning styles (Novawan, 2010; Peacock, 2001).

### Challenges in Implementing ICT for the Development of Students' English Language Skills

Implementing Information and Communication Technology (ICT) to improve students' English language skills amidst the pandemic has various benefits, including flexibility to learn at a different pace, personalized learning experiences, and access to a massive resource online. Nonetheless, the implementation also brings forth various challenges, which include:

*Inequity in Digital Access*

The availability of the Internet and digital devices such as computers and tablets is not universal, resulting in a substantial disparity in educational opportunities. It is especially apparent among students from disadvantaged socioeconomic backgrounds or those residing in remote or rural regions.(Gamayanti & Marzuq, 2021; Mahsunah, 2021; Mandasari et al., 2022; Mu'awanah et al., 2021; Sadikin et al., 2022; Soeharyono et al., 2022; Wahyuningsih et al., 2022). Infrastructure issues such as decent internet connection and bandwidth quality were also problems found in many of the records in this study (Handayani, 2020; Wahyuningsih et al., 2022; Soeharyono et al., 2022).

*Technical Competencies issues*

Effectively implementing ICT requires a specific set of digital skills from educators and students. It follows the knowledge of various tools and platforms, problem-solving capabilities for technical glitches, and an understanding of safe and appropriate online behavior. Several records are saying that teachers who are not adaptive to ICT methods in teaching will ultimately put the students back to being unexcited despite the lesson in the classroom using ICT tools (Anwar & Anjarningsih, 2022; Ayu & Pratiwi, 2021; Gamayanti & Marzuq, 2021; Kristianto Hondro et al., 2021; Nartiningrum & Nugroho, 2021)

*Lack of Personal Connection*

The development of language skills greatly benefits from personal communication and real-life application. Without direct interaction and communication with others, students may face challenges in developing their pronunciation, conversational skills, listening skills, and other aspects of English language learning when compared to learners who have opportunities for face-to-face interactions with fellow English learners or tutors (Hadi et al., 2020; Soeharyono et al., 2022; Sinaga & Pustika, 2021; Yuzulia, 2021).

*Need for pedagogical adaptation*

Students have different learning styles, and teachers need to adjust their teaching methods to accommodate digital learning and, at the same time, adapt to students' different learning styles. It may involve modifying lesson plans, incorporating new platforms or applications, and implementing tailor-made strategies to assess students' language skills in offline and remote settings. Adapting new ways of pedagogy is crucial to prevent student boredom and promote more effective learning (Fitriya et al., 2022; Gamayanti & Marzuq, 2021; Kusuma, 2022; Noeril Isvyna Soeharyono et al., 2022; Siahaan et al., 2022; Yuzulia, 2021).

*Health-related concerns*

Extended screen time can lead to various health issues such as eye strain, poor posture, and reduced physical activity. It may also increase stress and anxiety levels, especially when students feel overwhelmed by technology or lack social interactions (Meinawati et al., 2020; Susanti & Prameswari, 2020; Yuzulia, 2021).

**CONCLUSION**

During the COVID-19 pandemic, online learning was compulsory. Many apps, tools, and teaching methods were utilized to ensure that learning and teaching activities did not stop. As a required skill in 21st-century teaching, learning English skills also adjusts to implementing ICT within the teaching and learning context.

The implementation of ICT in English language teaching has gained positive results, with 91% of studies reporting success in improving students' language skills. The use of digital tools, multimedia, and visual aids has proven to enhance student motivation, comprehension, and engagement in the learning process despite some still encountering difficulties. The integration of various ICT tools and platforms has become essential in education during the COVID-19 pandemic and post-pandemic, with Zoom Meetings/Google Meet/Microsoft Teams and Google Classroom being widely used for online learning during the pandemic up to now.

The combination of synchronous and asynchronous learning, along with communication tools like WhatsApp and Telegram, has proven effective in assisting students in learning English skills to students in school settings. Additionally, using visual-based tools and multimedia content, such as YouTube and animations, has significantly improved students' language skills and created an engaging learning environment. Implementing ICT for English language learning during the pandemic offers flexible learning, personalized experiences, and diverse resources.

However, challenges also occurred, including inequity in digital access, technical competencies issues, lack of personal connection, the need for pedagogical adaptation, and health-related concerns associated with prolonged screen time. These challenges must be addressed to ensure effective and inclusive implementation of ICT in education.

### *Recommendations for Future Research*

- Conducting Reviews on ICT in English Learning in Inclusive Situations

Further studies on the implementation of ICT in English learning and teaching settings could be expanded to include schools that serve students with disabilities or special needs at the elementary, junior high, and high school levels. This inclusion will help understand the challenges and opportunities ICT presents in these settings and develop customized strategies to enhance learning outcomes for students with particular needs.

- Review ICT Implementation in Universities and Colleges

The implementation of ICT in universities or colleges should also be reviewed to see how it differs from school. University students are expected to have autonomy and complete control over their talents, interests, and the most effective learning methods. With the availability of online access, students can learn anywhere, anytime, and have various options for teaching methods. Therefore, conducting a literature review on English skills teaching methods at the university student level becomes an intriguing subject for further research.

## REFERENCES

Agustin, R.W., & Ayu, M. (2021). The impact of using Instagram for increasing vocabulary and listening skill. *Journal of English Language Teaching and Learning (JELTL)*, *2*(1), 1-7. https://jim.teknokrat.ac.id/index.php/english-language-teaching/article/view/767

Ahmad, C.N.A., Ridzuan, M.R., & Abd Rahman, N.A.S. (2022). The preferences and intentions of Terengganu's teachers regarding the use of emerging technologies. *International Journal of Academic Research in Progressive Education and Development*, *11*(3), 1042-1056. https://doi.org/10.6007/IJARPED/v11-i3/14922

Ahmed, O.A.A. (2018). EFL teachers' and students' approaches in using teaching aids: A case study. *Arab World English Journal*, *4*(4), 109–124. https://doi.org/10.24093/awej/call4.8

Alobaid, A. (2021). ICT multimedia learning affordances: Role and impact on ESL learners' writing accuracy development. *Heliyon*, *7*(7), e07517. https://doi.org/10.1016/j.heliyon.2021.e07517

Altun, M., & Khurshid, H. (2021). The use of technology in English language teaching: A literature review. *International Journal of Social Sciences and Educational Studies*, *8*(1), 226–232. https://doi.org/10.23918/ijsses.v8i1p226

Alzahrani, S. (2017). Linking multimedia vocabulary CALL research to SLA cognitive theories. *American Journal of Educational Research*, *5*(7), 821–827. https://doi.org/10.12691/education-5-7-19

Andayani, E.S. (2022). The importance of learning and knowing English in higher education in Indonesia. *Research and Development Journal of Education*, *8*(1), 372–379. https://doi.org/10.30998/rdje.v8i1.13315

Anwar, S.E., & Anjarningsih, H.Y. (2022). Pembelajaran bahasa Inggris hybrid pada masa pandemi Covid-19 di sekolah menengah pertama inklusi di kota Depok: Pengalaman dan perspektif peserta didik. *Jurnal IDEAS: Pendidikan, Sosial, Dan Budaya*, *8*(2), 495-502. https://doi.org/10.32884/ideas.v8i2.743

Aslihah, Wulandari, S., & Fadilah, Y.W. (2021). Penggunaan media ICT (Power Point) dalam pembelajaran bahasa asing untuk anak-anak desa Tinggar. *Jumat Informatika: Jurnal Pengabdian Masyarakat*, *2*(1), 1–6. https://doi.org/10.32764/abdimasif.v2i1.1166

Auliya, R.H., Nuroh, E.Z., Fpip, P., & Sidoarjo, U.M. (2022). Pengaruh media Storyjumper terhadap keterampilan membaca pemahaman siswa kelas II sekolah dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar,* *8*(1), 3405–3419. https://doi.org/10.23969/jp.v8i1.8514

Ayu, M., & Pratiwi, Z.F. (2021). The implementation of online learning in English language teaching during pandemic: The teachers voice. *Journal of Research on Language Education (JoRLE)*, *2*(2), 93–99. https://ejurnal.teknokrat.ac.id/index.php/JoRLE/index

Ayu, M., & Sari, F.M. (2022). Pelatihan siswa/i untuk meningkatkan kemampuan tata bahasa Inggris dasar melalui website grammar. *Journal of Technology and Social for Community Service (JTSCS)*, *3*(1), 132–137. https://ejurnal.teknokrat.ac.id/index.php/teknoabdimas

Bayar, A., & Karaduman, H.A. (2021). Views of high school students on the effectiveness of "English" course by means of a distance education. *Shanlax International Journal of Education*, *9*(4), 359–373. https://doi.org/10.34293/education.v9i4.4201

Buran, A., & Evseeva, A. (2015). Prospects of blended learning implementation at technical university. *Procedia - Social and Behavioral Sciences*, *206*, 177–182. https://doi.org/10.1016/j.sbspro.2015.10.049

Cavus, N., Uzunboylu, H., & Ibrahim, D. (2007). Assessing the success rate of students using a Learning Management System together with a collaborative tool in web-based teaching of programming languages. *Journal of Educational Computing Research*, *36*(3), 301–321. https://doi.org/10.2190/T728-G676-4N18-6871

Chowdhury, T.A. (2021). Fostering learner autonomy through cooperative and collaborative learning. *Shanlax International Journal of Education*, *10*(1), 89–95. https://doi.org/10.34293/education.v10i1.4347

Denney, A.S., & Tewksbury, R. (2013). How to write a literature review. *Journal of Criminal Justice Education*, *24*(2), 218–234. https://doi.org/10.1080/10511253.2012.730617

English First. (2023). *EF English proficiency index*. www.ef.com/epi

Fatmawati, N.L. (2021). Pengembangan video animasi Powtoon sebagai media pembelajaran bahasa Inggris usia sekolah dasar di masa pandemi. *INSANIA: Jurnal Pemikiran Alternatif Kependidikan*, *26*(1), 65–77. https://doi.org/10.24090/insania.v26i1.4834

Fernandez, C.J., Ramesh, R., & Manivannan, A.S.R. (2022). Synchronous learning and asynchronous learning during COVID-19 pandemic: A case study in India. *Asian Association of Open Universities Journal*, *17*(1), 1–14. https://doi.org/10.1108/AAOUJ-02-2021-0027

Fernández Dobao, A. (2012). Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, *21*(1), 40–58. https://doi.org/https://doi.org/10.1016/j.jslw.2011.12.002

Firmansyah, D.B., Mahmudah, S., Utami, B., Dhyaningrum, A., Pascarina, H., & Subuhi, I. (2021). Pelatihan English speaking skill untuk siswa-siswi MTSN 8 Kebumen: Merawat kreativitas selama pandemi Covid. *Jurnal Pengabdian Kepada Masyarakat Bina Darma)*, *1*(2), 119–131. https://doi.org/10.33557/pengabdian.v1i1

Fitriya, A.H., Setyawan, A., Yunsacitra, & Noviyanti, S. (2022). Analisa pembelajaran bahasa Inggris di sekolah dasar saat pandemi Covid-19. *Jurnal Pendidikan Dan Konseling*, *4*(3), 258–264. https://doi.org/10.31004/jpdk.v4i3.4302

Gamayanti, W., & Marzuq, F.G. (2021). Media animasi dalam meningkatkan motivasi pembelajaran bahasa Inggris pada masa pandemi Covid-19. *UIN Sunan Gunung Djati Bandung*, *1*. https://proceedings.uinsgd.ac.id/index.php/Proceedings

Gilakjani, A.P, & Sabouri, N.B. (2017). Advantages of using computer in teaching English pronunciation. *International Journal of Research in English Education*, *2*(3), 78–85. https://doi.org/10.18869/acadpub.ijree.2.3.78

Gomez, F.C., Trespalacios, J., Hsu, Y.C., & Yang, D. (2022). Exploring teachers' technology integration self-efficacy through the 2017 ISTE standards. *TechTrends*, *66*(2), 159–171. https://doi.org/10.1007/s11528-021-00639-z

Grant, M.J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Guan, N., Song, J., & Li, D. (2018). On the advantages of computer multimedia-aided English teaching. *Procedia Computer Science*, *131*, 727–732. https://doi.org/10.1016/j.procs.2018.04.317

Hadi, M.S., Athallah, N., & Iswan. (2020). Efektifitas gamifikasi dalam mengajar bahasa Inggris secara daring di era pandemic. *Prosiding Seminar Nasional Penelitian LPPM*, *7*, 1-9. http://jurnal.umj.ac.id/index.php/semnaslit

Handayani, D. (2020). Pemanfaatan YouTube pada saat pandemi Covid 19 untuk media pembelajaran bahasa Inggris dalam meningkatkan vocabulary dan pemahaman siswa. *Jupendik: Jurnal Pendidikan*, *12*(2), 12-18. https://www.jupendik.or.id/index.php/jupendik/article/view/33/18

Haryati, S., Sukarno, S., & Purwanto, S. (2021). Implementation of online education during the global Covid-19 pandemic: Prospects and challenges. *Cakrawala Pendidikan*, *40*(3), 604–612. https://doi.org/10.21831/cp.v40i3.42646

Hidayati, T. (2022). Integrating ICT in English language teaching and learning in Indonesia. *JEELS (Journal of English Education and Linguistics Studies)*, *3*(1), 38–61. https://doi.org/10.30762/jeels.v3i1.173

Hodges, C., Moore, S., Lockee, B.B., Trust, T., & Bond, M.A. (2020). *The difference between emergency remote teaching and online learning*. Educause Review. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning?s=03

Hondro, R.K, Ramadhani, P., & Sayuthi, M. (2021). Pemanfaatan aplikasi Google Classroom untuk manajemen pembelajaran bahasa Inggris di Sekolah Menengah Pertama Islam Terpadu Al Munadi di masa pandemi Covid 19. *Jurnal Pengabdian Kepada Masyarakat Nusantara (JPkMN)*, *1*(2), 66–70. https://ejournal.sisfokomtek.org/index.php/jpkm/article/view/164

Hong, Z.W., Huang, Y.M., Hsu, M., & Shen, W.W. (2016). Authoring robot-assisted instructional materials for improving learning performance and motivation in EFL classrooms. *Educational Technology and Society*, *19*(1), 337–349. https://www.jstor.org/stable/jeductechsoci.19.1.337

Kizi, Y.U.B., Bozorova, M.S., Mansurova, N.A., Kizi, A.Z.A., & Qizi, S.A.S. (2020). Language teaching methods: Theory and practice. *Journal of Critical Reviews, 7*(5), 768–775. https://doi.org/10.31838/jcr.07.05.157

Kusuma, I.P.I. (2022). EFL preservice teachers' technology integration in managing and teaching speaking skills during emergency remote teaching. *Profile: Issues in Teachers' Professional Development*, *24*(2), 149–165. https://doi.org/10.15446/profile.v24n2.97497

Levy, M. (1997). *Computer-assisted language learning: Context and Conceptualization*. Oxford University Press.

Lina, M.F., & Hidayati, D.N. (2022). Using WhatsApp group & Google Meet during online class, why not? *Elsya: Journal of English Language Studies*, *4*(3), 276–289. https://doi.org/10.31849/elsya.v4i2.9787

Lingard, L. (2021). Collaborative writing: Strategies and activities for writing productively together. *Perspectives on Medical Education*, *10*(3), 163–166. https://doi.org/10.1007/S40037-021-00668-7

Mahsunah, E. (2021). Pembelajaran bahasa Inggris berbasis literasi digital pada masa pandemi Covid-19. *Qalamuna - Jurnal Pendidikan, Sosial, Dan Agama*, *13*(2), 957–968. https://doi.org/10.37680/qalamuna.v13i2.1257

Mandasari, B., Rido, A., & Kuswoyo, H. (2022). Using Zoom meeting platform as a synchronous online learning tool in EFL classroom at Indonesia tertiary level: A literature review. *Proceedings of International Conference on Cognition and Exploratory Learning in Digital Age*, 291-294. https://files.eric.ed.gov/fulltext/ED626906.pdf

Maru, M. G., Nur, S., & Lengkoan, F. (2020). Applying video for writing descriptive text in senior high school in the COVID-19 pandemic transition. *International Journal of Language Education*, *4*(3), 408–419. https://doi.org/10.26858/ijole.v4i3.14901

Marzal, J. (2014). Desain media pembelajaran bahasa Inggris untuk siswa tunarungu berbantuan teknologi informasi dan komunikasi. *Tekno--Pedagogi*, *4*(2), 32–44. www.edmodo.com.

Maulidya, R.A, Atasyah, N.F., Husna, N., Hidayat, N., Hamid, F., & Kunci, K. (2021). The implementation of communicative media for teaching English as a Foreign Language (EFL) during pandemic of Covid-19 in Indonesian senior high schools. *Jurnal Ilmiah Kependidikan*, *8*(1), 73–92. https://doi.org/10.30998/fjik.v8i1.8595

Mazlan, A.F., Mohamad, M., Reesha, A., Kassim, R., Othman, Z., & Kummin, S. (2021). Challenges and strategies to enhance online remote teaching and learning by tertiary institution educators: A literature review. *Creative Education*, *12*(04), 718–726. https://doi.org/10.4236/ce.2021.124050

Meinawati, E., Harmoko, D. D., Rahmah, N.A., & Dewi, N. (2020). Increasing English speaking skills using YouTube. *Polyglot: Jurnal Ilmiah*, *16*(1), 1-13. https://doi.org/10.19166/pji.v16i1.1954

Mengist, W., Soromessa, T., & Legese, G. (2020). Ecosystem services research in mountainous regions: A systematic literature review on current knowledge and research gaps. *Science of the Total Environment, 702*, 1-57. https://doi.org/10.1016/j.scitotenv.2019.134581

Mu'awanah, N., Sumardi, & Suparno. (2021). Using Zoom to support English learning during Covid-19 pandemic: Strengths and challenges. *Jurnal Ilmiah Sekolah Dasar*, *5*(2), 222–230. https://ejournal.undiksha.ac.id/index.php/JISD/index

Nartiningrum, N., & Nugroho, A. (2021). English teachers' perspectives on challenges, suggestions, and materials of online teaching amidst the global pandemic. *IJEE (Indonesian Journal of English Education)*, *8*(1), 108-126. https://doi.org/10.15408/ijee.v1i1.17886

Novawan, A. (2010). The use of visual aids in ELT materials. In H. P. Widodo & L. Savova (Eds.), *The Lincom Guide to Materials Design in ELT* (pp. 39–54). Lincom Europa.

Nugroho, A., Ilmiani, D., & Rekha, A. (2021). EFL teachers' challenges and insights of online teaching amidst global pandemic. *Metathesis: Journal of English Language, Literature, and Teaching*, *4*(3), 277-291. https://doi.org/10.31002/metathesis.v4i3.3195

Nurjanah, M., & Prastowo, A. (2021). Utilizing YouTube as a material for ICT learning at elementary school during the COVID-19 pandemic. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, *10*(5), 1132-1141. https://doi.org/10.33578/jpfkip.v10i5.8412

Pardede, P. (2012). Blended learning for ELT. *JET: Journal of English Teaching*, *2*(3), 165-178. https://files.eric.ed.gov/fulltext/ED599644.pdf

Peacock, M. (2001). Match or mismatch? Learning styles and teaching styles in EFL. *International Journal of Applied Linguistics*, *11*(1), 1–20. https://doi.org/10.1111/1473-4192.00001

Pham, V. P. H. (2021). The effects of collaborative writing on students' writing fluency: An efficient framework for collaborative writing. *SAGE Open*, *11*(1), 1-11. https://doi.org/10.1177/2158244021998363

Rasman, R. (2021). penggunaan YouTube sebagai media pembelajaran bahasa Inggris pada masa pandemi Covid 19. *EDUTECH: Jurnal Inovasi Pendidikan Berbantuan Teknologi*, *1*(2), 118-126. https://doi.org/10.51878/edutech.v1i2.442

Aditya P. Nugraha, Fajar Duriat, & Rusdayanti

Rasmitadila, Aliyyah, R.R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A.R.S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies*, *7*(2), 90–109. https://doi.org/10.29333/ejecs/388

Reflianto, Setyosari, P., Kuswandi, D., & Widiati, U. (2021). Reading comprehension skills: The effect of online flipped classroom learning and student engagement during the COVID-19 pandemic. *European Journal of Educational Research*, *10*(4), 1613–1624. https://doi.org/10.12973/EU-JER.10.4.1613

Richards, J.C. (2015). Technology in language teaching today. *Indonesian Journal of English Language Teaching*, *10*(1), 18–32. https://doi.org/10.25170/ijelt.v10i1.654

Rokhman, N., & Ahmadi, F. (2020). Pengembangan game edukasi Si Gelis berbasis android untuk meningkatkan kosakata bahasa Inggris siswa. *Edukasi*, *14*(2), 166–175. https://doi.org/10.15294/edukasi.v14i2.27477

Sadikin, I.S., Nurchaerani, M., & Nugroho, O.F. (2022). Pembuatan digital storytelling melalui Google Earth sebagai upaya meningkatkan kemampuan siswa berbicara dalam bahasa Inggris. *Abdimas Siliwangi*, *5*(1), 191-200. https://doi.org/10.22460/as.v5i1.10143

Saed, H.A., Haider, A.S., Al-Salman, S., & Hussein, R.F. (2021). The use of YouTube in developing the speaking skills of Jordanian EFL university students. *Heliyon*, *7*(7), 1–6. https://doi.org/10.1016/j.heliyon.2021.e07543

Sahu, P. (2020). Closure of universities due to Coronavirus Disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, *12*(4), e7541. https://doi.org/10.7759/cureus.7541

Santika, D.M., Agung, M., & Apriliani, K. (2021). Video pembelajaran untuk peningkatan kemampuan bahasa Inggris tingkat sekolah dasar. *International Journal of Community Service Learning*, *5*(4), 342–352. https://doi.org/10.23887/ijcsl.v5i4

Sari, V.D.A., & Arini, R. (2021). SPARK: Pemanfaatan platform StoryJumper dalam pembelajaran bahasa Inggris anak-anak sekolah dasar. *KANGMAS: Karya Ilmiah Pengabdian Masyarakat*, *2*(2), 171–177. https://doi.org/10.37010/kangmas.v2i2.316

Seenivasan, R. (2024). ICT in education: A critical literature review and its implications. *International Journal of Finance, Insurance and Risk Management*, *14*(1), 12-27. https://econpapers.repec.org/RePEc:ers:ijfirm:v:14:y:2024:i:1:p:12-27

Shishkovskaya, J., Bakalo, D., & Grigoryev, A. (2015). EFL teaching in the e-learning environment: Updated principles and methods. *Procedia - Social and Behavioral Sciences*, *206*, 199–204. https://doi.org/10.1016/j.sbspro.2015.10.007

Siahaan, R., Rajagukguk, H., Sianturi, B. M., Sihombing, S.Y., & Gultom, A.J. (2022). Penggunaan teknologi media pembelajaran Google Classroom terhadap motivasi minat belajar siswa dimasa pandemi COVID-19. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, *8*(1), 66. https://doi.org/10.29210/1202221929

Sinaga, R.R.F., & Pustika, R. (2021). Exploring students' attitude towards English online learning using Moodle during COVID-19 pandemic at SMK Yadika Bandar Lampung. *Journal of English Language Teaching and Learning*, *2*(1), 8–15. http://jim.teknokrat.ac.id/index.php/english-language-teaching/index

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*, 333–339. https://doi.org/https://doi.org/10.1016/j.jbusres.2019.07.039

Soeharyono, J.N.I., Budiman, M.A., & Damayani, A. (2022). Efektivitas pembelajaran daring menggunakan media online selama pandemi Covid-19 pada mata pelajaran bahasa Inggris kelas IV SD negeri Pengkol Jepara. *Praniti Jurnal Pendidikan, Bahasa, & Sastra*, *2*(1), 43–53. http://jurnal.unw.ac.id:1254/index.php/praniti/index

Soon, H.C., & Abdul Aziz, A. (2022). Teaching English online during the Covid-19 pandemic: A systematic literature review (2020 – 2022). *International Journal of Academic Research in Progressive Education and Development*, *11*(2), 395-415. https://doi.org/10.6007/IJARPED/v11-i2/13251

Susanti, D.I., & Prameswari, J.Y. (2020). Adaptasi blended learning di masa pandemi COVID-19 untuk pembelajaran bahasa Inggris di sekolah dasar. *Lingua Sastra*, *1*(2), 50–61. https://doi.org/10.24036/ls.v1i2.8

The UNESCO Institute for Statistics. (2009). *Guide to Measuring Information and Communication Technologies (ICT) in Education.* UNESCO Institute for Statistics.

Tinungki, G.M., & Nurwahyu, B. (2020). The implementation of Google Classroom as the e-learning platform for teaching non-parametric statistics during COVID-19 pandemic in Indonesia. *International Journal of Advanced Science and Technology*, *29*(4), 5793–5803. https://www.researchgate.net/publication/342719907

Wahyudin, A.Y., Daud, J., Simamora, M.W., Pratiwi, I.W., & Rina, A. (2020). Penggunaan komik digital Toondoo dalam pembelajaran bahasa Inggris tingkat sekolah menengah. *Journal of Social and Technology for Community Service (JSTCS), 1*(1), 1-32. https://ejurnal.teknokrat.ac.id/index.php/teknoabdimas

Wahyuningsih, S.P, Budiman, M.A., & Sari, V.P. (2022). Analisis manfaat penggunaan YouTube sebagai media pembelajaran online bahasa Inggris dalam meningkatkan pemahaman siswa. *Praniti Jurnal Pendidikan, Bahasa, & Sastra*, *2*(1), 1-7. http://jurnal.unw.ac.id:1254/index.php/praniti/index

Wang, M., Shen, R., Novak, D., & Pan, X. (2009). The impact of mobile learning on students' learning behaviours and performance: Report from a large blended classroom. *British Journal of Educational Technology*, *40*(4), 673–695. https://doi.org/10.1111/j.1467-8535.2008.00846.x

Xiao, Y., & Watson, M. (2017). Guidance on conducting a systematic literature review. *Journal of Planning Education and Research*, *39*(1), 93–112. https://doi.org/10.1177/0739456X17723971

Yermekkyzy, A. (2022). *Using ICT applications in EFL teaching: Challenges and experiences of novice vs. experienced english teachers* [Master's thesis, Suleyman Demirel University]. https://osf.io

Yuzulia, I. (2021). The challenges of online learning during pandemic: Students' voice. *Wanastra: Jurnal Bahasa Dan Sastra*, *13*(1), 8–12. https://doi.org/10.31294/w.v12i1

Zainuddin, N. (2023). Technology enhanced language learning research trends and practices: A systematic review (2020-2022). *Electronic Journal of E-Learning*, *21*(2), 69–79. https://doi.org/10.34190/ejel.21.2.2835

Zakiah, N. I., Yahmun, Y., Mukarom, M., & Aryawan, F. N. (2020). Google Classroom sebagai teknologi alternatif untuk mengajar bahasa Inggris online di masa pandemi COVID-19. *Prosiding Seminar Nasional IKIP Budi Utomo*, *1*(01), 680–687. https://doi.org/10.33503/prosiding.v1i01.1100