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Students' Insights on the Effectiveness of ICT in Junior High School English Learning

Nurhayati¹ ; *Herdi²

¹Department of English Education, Universitas Lancang Kuning, Pekanbaru, Indonesia;
nhyati6566@gmail.com; [*herdi@unilak.ac.id](mailto:herdi@unilak.ac.id)

(*) Corresponding Author

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ABSTRACT

The use of Information and Communication Technology (ICT) in secondary education is increasing along with the development of technology during 21st century learning. This study aims to examine students' perceptions of the use of ICT in English learning at SMPN 6 Pekanbaru. Using quantitative method with survey design, this study involved 350 students as respondents selected through Simple Random Sampling technique. Data were collected using a questionnaire based on a Likert scale of 1-5 and analyzed using descriptive statistical techniques with the SPSS version 25 program. The results showed that students' perceptions of ICT use were in the moderate to high category with an average score of 3.30. In the aspect of time management, students find it helpful in organizing study schedules and completing assignments on time. In terms of confidence, students feel comfortable in communicating and learning through ICT platforms, although there are still doubts about the effectiveness of fully online learning. In addition, the benefits indicator shows that students appreciate easy access to learning resources, collaboration opportunities in group tasks, and interactive learning experience. This study concludes that although the use of ICT provides significant benefits in English language learning, steps are still needed to optimize its use.

Key Words: Information and Communication Technology; English Language Learning; Student Perception; Secondary Education; Time Management.

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INTRODUCTION

Information and Communication Technology (ICT) has become an integral component in modern education. The role of ICT is not only limited as an auxiliary tool, but also as the main media in the teaching and learning process. According to Bereczki & Kárpáti (2021), the use of ICT in learning can increase the effectiveness of teaching by providing broad access to various learning resources, both in the form of text, audio, video, and interactive simulations.

*Corresponding author

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ICT also enables the creation of learning that is more adaptive and responsive to the individual needs of learners. ICT acts as a tool and media that enables the teaching and learning process to be more interactive, effective and efficient.

The rapid development of technology in the 21st century also opens up great opportunities for innovation in education. According to Noor et al., (2022), evolving technology provides many options for educators to enhance students' learning experience through the use of digital platforms, multimedia, and technology-based simulations. Technologies such as Augmented Reality (AR), Virtual Reality (VR), and Artificial Intelligence (AI) are also starting to be integrated in education, providing a more real and personalized learning experience in the learning process (Putra & Santoso, 2024). Educators can now use Learning Management System (LMS) and learning applications such as Kahoot, Quizizz, or Google Classroom to create interactive and adaptive learning experiences according to the needs of students (Küçükakın & Demir, 2021; Liu et al., 2020). Therefore, the mastery of ICT for educators is crucial in order to keep up with the times and prepare students to face future challenges.

The use of technological devices such as computers, tablets, projectors, and various online learning applications provides an opportunity for educators to deliver material more interestingly and easily understood by students (Jiang et al., 2023). In addition, ICT also supports distance learning (e-learning) and technology-based learning (blended learning), which provides flexibility in learning time and place (Liu et al., 2020). By utilizing ICT, educators can create a learning environment that supports collaboration, communication, and access to wider learning resources.

The transformation of teaching methods in the context of modern education has become a highly relevant topic, especially with the rapid development of information and communication technology (ICT). Traditionally, Rizky & Zainil (2021) confirmed that teaching methods generally adopt a teacher-centered approach, where the teacher acts as the main source of knowledge, while students tend to play a passive role as recipients of information. This conventional learning process is often limited to the use of textbooks, whiteboards and one-way lectures. However, with the arrival of ICT, this approach undergoes a fundamental change towards more interactive and student-centered learning (AlZuhair & Alkhuzaim, 2022; Fang & Abdullah, 2024).

The positive impact of this transformation of teaching methods is also seen in the improvement of student learning outcomes. A study by Fang & Abdullah (2024) and Rorimpandey & Midun (2021) found that students who learned using technology-based methods showed better academic performance improvement compared to students who only used traditional methods. In addition, technology also enables personalized learning, where students can learn according to their own pace and level of understanding through the use of adaptive applications and self-paced learning modules.

However, the transformation of teaching methods through technology also has its own challenges. Some of these include the readiness of teachers to master technology, the availability of adequate infrastructure, and the need for supervision and mentoring in the use of technology by students (Jiang et al., 2023; Kamalov et al., 2023). Therefore, training and professional development for teachers are essential to ensure that the implementation of technology in teaching is effective and meets the learning objectives. Overall, the transformation of teaching methods with the help of ICT not only improves the quality of the learning process but also makes a positive contribution to the development of 21st century skills, such as critical thinking, collaboration, creativity and digital literacy (Sujarwo, 2021). With the right utilization of technology, learning can be more dynamic, engaging, and adaptive to the needs of students in this digital era.

The use of multimedia in English Language Teaching (ELT) offers significant advantages in improving the quality of the learning process. Various types of multimedia, such as video, animation, audio, and interactive exercises, allow the delivery of teaching materials in a more interesting and effective way (Meshkat & Mohammadpour, 2019). According to Smith & Storrs (2023), well-designed learning videos can present authentic contexts in English usage, enriching students' understanding through visualization of real-life situations. Videos can also help students in understanding verbal and non-verbal expressions in English communication, which are often difficult to explain through text alone.

Furthermore, Information and Communication Technology (ICT) has a crucial role in driving social and educational change. The application of ICT in education has opened up new opportunities in teaching and learning methods, especially in English language learning. According to Ammade et al., 2018 and Fang & Abdullah (2024), the integration of ICT in the education curriculum not only increases the effectiveness of learning but also gives students wider access to various international learning resources. The positive impact of ICT is not only limited to the realm of education, but also covers the social and cultural aspects of society (Aguilera & Pandya, 2021).

In this digital era, digital literacy is one of the important competencies that students must have. The use of ICT in learning helps students develop critical, collaborative, and creative thinking skills that are indispensable in facing the challenges of globalization (Asare et al., 2023; Ayu et al., 2024; Bereczki & Kárpáti, 2021). In addition, teachers who utilize technology in the learning process act as agents of social change. They not only update their pedagogical practices but also help society adapt to technological developments. According to Ayu & Rizky (2023), teachers who actively use ICT in learning help build a digital culture among students and encourage better digital literacy in the surrounding community. ICT-based learning programs such as e-learning and virtual classes make it easier for students to access learning materials anytime and anywhere, thus increasing fairer and more equitable learning opportunities (Fabian et al., 2024).

Initial observations at SMPN 6 Pekanbaru show that many teachers are still unfamiliar with the use of Information and Communication Technology (ICT) tools in the learning process. This limitation is not only influenced by the lack of technical competence of teachers, but also closely related to various other supporting factors, such as lack of adequate training, limited access to technology resources, and resistance to change. According to (Ramadansur et al., 2024), inadequate training can lead to teachers' low ability to utilize technology-based learning tools and applications, hindering the integration of ICT in the classroom. This condition is exacerbated by infrastructure limitations, including the availability of hardware, software, and stable and adequate internet access (Brunetti et al., 2020).

In addition, resistance to change is also a significant challenge in the implementation of ICT in schools. A study by Ramadansur et al., 2023 & Utomo et al., (2024) revealed that some teachers tend to maintain conventional teaching methods that they feel are safer and more comfortable. They may experience concerns related to the complexity of the technology or fear mistakes in its use (EKİZER & Akıncı, 2023). This is consistent with the theory of educational change which states that innovative changes in education require mental readiness, skills and strong support from all stakeholders (Bastian et al., 2023). Therefore, it is important to address this challenge through organizing continuous training, providing adequate technology facilities, and creating a school culture that supports innovation and technology-based learning. With these steps, it is expected that teachers can be more confident in utilizing ICT to improve learning quality and achieve better learning outcomes for students.

*Corresponding author

Understanding students' perspectives on the use of ICT in learning is crucial in creating a more effective and enjoyable learning experience. Students as end users of educational technology often have different views from teachers on how ICT can help or hinder the learning process (Bereczki & Kárpáti, 2021). Involving students in the evaluation of ICT use can provide valuable insights into what aspects work and what needs to be improved. According to a study by (Wahyudi et al., 2023), students who felt facilitated by the use of ICT in learning showed increased motivation, active participation, and a deeper understanding of the material. This is in line with the findings of Meşe & Sevilen (2021) who revealed that ICT-based learning applications are able to provide wider access to various learning resources, support flexibility in self-learning, and increase interaction through online learning platforms. For this reason, it is important for teachers and school administrators to pay attention to student feedback in developing technology-based learning strategies that are more adaptive and responsive to learners' needs. This approach will not only improve the quality of learning but also strengthen students' engagement in active and collaborative learning processes.

This research aims to provide a comprehensive picture of students' perceptions of the use of Information and Communication Technology (ICT) in English language learning at SMPN 6 Pekanbaru. The use of ICT in education has become a necessity along with the development of technology and the demands of 21st century learning (Syahdan & Ali, 2022). However, its implementation does not always run smoothly, especially at the junior high school level. In addition to analyzing the existing challenges, this research also aims to offer concrete solutions to improve the effectiveness of ICT use in achieving educational goals. The solutions offered will be based on field findings and a review of current literature, including strategies to improve teachers' competencies through continuous training, development of technology-based learning materials, and pedagogical approaches that are more adaptive to students' needs. Thus, it is expected that this research will not only provide theoretical contributions in the field of education, but also offer practical recommendations for stakeholders in creating a more effective, innovative and inclusive learning environment through the utilization of ICT.

METHODS

Research design

This study uses a descriptive quantitative approach to analyze and explain the characteristics of individuals or groups through numerical data. According to (Sugiyono, 2017), quantitative research methods are based on the philosophy of positivism and are applied to research certain populations and samples. The sampling technique used is generally random, with data collection carried out through various research instruments. Data analysis is carried out quantitatively using statistical methods with the main objective of testing previously established hypotheses. This research focuses on evaluating the current conditions related to the application of Information and Communication Technology (ICT) in the English Language Teaching (ELT) process in junior high schools. Specifically, this study aims to describe students' perceptions regarding the integration of ICT in learning. Through the systematic presentation and interpretation of data, this research is expected to provide a comprehensive understanding of the issues at hand as well as providing insights into the impact of ICT on the educational process.

Research site and participants

This study used a quantitative design to analyze students' perspectives on the use of Information and Communication Technology (ICT) in English language learning at the junior secondary school level, specifically at SMPN 6 Pekanbaru. Using Simple Random Sampling

technique, this study initially targeted all junior secondary school students in the area which amounted to 390 students (Cohen et al., 2013). However, due to time and funding constraints, the study focused on a more affordable sample around the school area and eventually involved 350 students as respondents. Despite these limitations, the study still used online questionnaires to collect data and sought to gain comprehensive insights within the scope. By focusing on the local group, this research is expected to provide meaningful insights into the use of ICT in English language learning at SMPN 6 Pekanbaru, while taking into account the limitations of the sample size.

Data collection and analysis

Research instruments are important tools in data collection, and in this study an online questionnaire through Google Forms was used. The questionnaire was specifically designed to explore students' perceptions and experiences regarding the use of Information and Communication Technology (ICT) in English language learning (Opuni & Alhassan, 2023). There are 25 statements in the questionnaire covering aspects of time management, confidence, and benefits of online learning platforms, with a 5-option Likert scale from "Strongly Agree" to "Strongly Disagree."

Data collection was conducted efficiently using an online questionnaire, providing convenience in data distribution and processing. Data analysis began with the tabulation of questionnaire results, followed by data processing using the SPSS version 25 program. Data were analyzed using descriptive statistical techniques, including the calculation of means and standard deviations to assess students' perceptions of ICT integration.

The researcher also conducted a normality test as a preliminary stage in the inferential statistical analysis. Independent Samples T-Tests were used to compare data by gender, while one-way ANOVA tests were used to compare groups by age or year of study. The results of this analysis provide important insights into the barriers and benefits of ICT use in educational contexts, as well as helping to improve technology integration in English language teaching.

FINDINGS AND DISCUSSION

Findings

Based on the research results, students' perceptions of the use of ICT at SMPN 6 Pekanbaru are in the medium level category. This assessment is obtained through data analysis using the SPSS Version 25 program, where all indicators used in this study have been comprehensively calculated. This calculation process involves quantitative data processing to obtain an overall score that represents students' views on the effectiveness and benefits of using ICT in the learning process. Further details regarding the results of this analysis can be seen clearly in the following table:

Table 1. Students' Perceptions Overall Score through the use of ICT

| | |
|--------|-------|
| Sum | 13316 |
| Mode | 4.00 |
| Median | 3.00 |
| Mean | 3.30 |

*Corresponding author

Based on table 1, the data presented provides a summary of students' perceptions of ICT usage at SMPN 6 Pekanbaru. The total score (Sum) of 13,316 indicates that there is quite a lot of data collected on this topic. The mean (mode) score of 4.00 indicates that the most common perception among students is quite positive, as a score of 4 reflects a high value on the scale used. However, the median score of 3.00 indicates that while many students have positive views, there is a sizable group with more neutral or moderate perceptions, as 3 usually reflects a middle value.

The mean score of 3.30, slightly above 3, reinforces that overall student perceptions tend to be somewhat positive but not overwhelmingly so. This mean score indicates a general but still moderate tendency towards a positive view of the role of ICT in education in this school. The very low standard deviation of 0.051 indicates that most of the student responses cluster around the mean, indicating consistency in student perceptions. Overall, these figures illustrate that while responses to ICT use are generally positive, students' opinions are relatively uniform and do not show significant variations. The low standard deviation value also means that all responses from respondents are homogeneous.

Discussion

The utilization of Information and Communication Technology (ICT) in education not only provides easy access to information, but also has a significant role in students' study time management. Through various applications and digital devices, Students' perception of ICT usage narrowed to a conclusion which it helps students to organize their study schedule more effectively and efficiently. In the context of time management, students often face challenges in making study plans and avoiding the tendency to postpone tasks. The presence of ICT provides a practical solution to this problem through features that support optimal time organization.

One example is the use of reminder apps and digital calendars that are increasingly popular among students. Apps like Google Calendar, Microsoft To Do, or education-specific apps like My Study Life allow students to create daily schedules, set learning targets, and organize assignment deadlines in a more structured manner. The automatic reminder feature on these apps also helps students stay on track in completing academic tasks. According to research by (Argudo-Serrano et al., 2023), the use of digital calendars has proven effective in improving student focus and productivity. This is due to the application's ability to provide regular notifications that remind students of activities that must be done, thus reducing the risk of procrastination.

In addition, ICT also allows students to utilize simple project management features, such as the creation of to-do lists or checklists in certain applications (Liu et al., 2020). This feature provides a visualization of the progress of the tasks to be completed, so students can easily monitor their achievements. With this visualization, students are more encouraged to complete tasks on time and feel satisfied when they can check off completed tasks. This positive psychological effect also supports better time management as students become more motivated to be productive (Twenge, 2019).

The long-term impact of using ICT in time management as proposed by (Herwiana & Laili, 2022), is not only felt in the academic context, but also equips students with important time management skills for everyday life. These skills become valuable assets when they enter the workforce where the ability to manage time independently is needed. Thus, ICT is not just a tool in the learning process, but also a means of developing sustainable life skills (Vodă et

al., 2022).

Then, Information and Communication Technology (ICT) has an important role in encouraging student learning independence. Asare et al., (2023) confirmed that the use of ICT provides opportunities for students to access a wider range of learning resources, such as e-books, journals, learning videos, and online learning platforms. Through ICT, students can search for additional information relevant to the subject matter independently without always depending on the teacher. In addition, technology-based learning platforms, such as Learning Management System (LMS), allow students to download materials, take online quizzes and do assignments independently (Liu et al., 2020). Thus, students learn to manage their time, set priorities, and complete tasks on their own.

This increases students' sense of responsibility for their learning process, as they are more actively involved in determining the direction and goals of their own learning. According to Labib et al., (2023) & Silitonga (2021), independence in learning is also related to the development of metacognitive skills, where students are able to plan, monitor and evaluate their learning process independently. In addition, with the ability to access various types of media and information, students are encouraged to think critically and be able to sort out relevant and valid information, thus enriching their understanding of the material being studied.

In addition, Herwiana & Laili (2022) argue that students in the current digital era tend to feel comfortable in utilizing ICT as a means of communication, both to interact with peers and with teachers. Platforms such as WhatsApp, Google Classroom, Zoom, and other social media are effective communication tools for asking questions, discussing, or sharing information about assignments and learning materials. For example, students can easily contact teachers via text message to ask for clarification of material or get guidance in completing a particular assignment. This makes communication between students and teachers more flexible and not limited by time and space (Abdillah & Sueb, 2022). This convenience is inseparable from the increasing accessibility of technology and digital literacy among students.

Ikhwan & Andriyanti (2021) state that the ease of accessing technological devices and skills in using various digital applications contribute positively to students' confidence in communicating using ICT. In addition, the use of ICT in communication also helps students who may feel less confident speaking directly in class. Through digital communication, they have more time to formulate questions or answers, so their participation in learning increases. It also helps to create an inclusive learning environment, where all students have equal opportunities to be actively involved in the learning process (Xue et al., 2024).

Collaborative experiences using Information and Communication Technology (ICT) in educational contexts show a positive response from students, especially in collaborating with peers. The use of collaborative applications such as Google Docs and Microsoft Teams provides many advantages in supporting the shared learning process (Aini et al., 2023; Baker & Spencely, 2023). Through real-time document sharing and editing features, students can more easily convey ideas, provide feedback, and improve group work without having to meet in person. This kind of collaboration not only increases the effectiveness in completing tasks, but also trains communication and teamwork skills in a digital environment (Kraus et al., 2021).

However, not all forms of collaboration through ICT are without obstacles. One challenge that students often face is interacting with lecturers in a digital environment. While apps such as Microsoft Teams or Zoom allow communication through text, audio and video

*Corresponding author

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messages, limitations in non-verbal communication are often a barrier. Non-verbal cues, such as facial expressions, body language and voice intonation, play an important role in conveying deeper meaning and helping to build emotional connections in learning. When interactions only occur through text or in suboptimal video conditions, this non-verbal information is not fully conveyed, potentially leading to miscommunication or lack of student engagement in academic discussions (Smith & Storrs, 2023).

Furthermore, the lack of non-verbal communication can also affect students' perception of the teachers' level of attention and responsiveness (Abacioglu et al., 2020). In face-to-face learning, lecturers' eye contact and facial expressions can signal motivation or encouragement to students. In contrast, in online communication, many of these aspects are missing or not obvious. This condition can cause students to feel less supported or have difficulties in understanding the learning material. Therefore, Lestari & Asari (2023) and Tasneem (2021) suggest that a more adaptive approach is needed in utilizing ICT to create more meaningful interactions between lecturers and students, for example by utilizing video features more actively or using technologies that support visual and kinesthetic interactions in distance learning.

The uniqueness of the findings related to students' perceptions of online English language learning suggests a contradiction between confidence in the use of Information and Communication Technology (ICT) and the effectiveness of learning itself. On the one hand, Vadivel et al., (2021) found that many students feel quite confident in using ICT to communicate in English. They are familiar with various digital platforms such as video conferencing applications, online discussion forums, as well as digital collaborative tools that enable remote communication and more flexible access to learning materials. This mastery helps them in doing technology-based tasks and enhancing digital literacy skills that are essential in the modern era (Lythreatis et al., 2022).

However, on the other hand, students also realize that fully online English learning is not as effective as face-to-face learning, especially in the aspects of verbal interaction and immediate feedback (Rorimpandey & Midun, 2021). In face-to-face learning, students can actively participate in class discussions, do spontaneous speaking practice, and receive correction or feedback from teachers or peers directly. This interaction not only improves language skills, but also builds confidence and critical thinking skills through two-way communication (Romadlon, 2022; Siswati et al., 2023; Tasneem, 2021; Wandari et al., 2024). Immediate feedback, whether in the form of correction of mispronunciations, grammar mistakes or detailed explanations, allows students to understand their mistakes more quickly and effectively.

In contrast, in online learning, technological limitations, internet connection interruptions, and lack of physical interaction often become obstacles. For example, in online classes, response times are often delayed, and nonverbal expressions such as gestures and facial expressions are not always clearly visible. This can reduce message clarity and affect the language learning process, especially in speaking and listening skills that require sensitivity to the nuances of communication. Jiang et al., (2023); Nadhirah et al., (2024) and Smith & Storrs (2023) also emphasize that although technology can provide a variety of interactive learning media, the role of direct communication in the language learning process cannot be fully replaced by digital media. Thus, although online learning offers flexibility, its effectiveness in improving students' English language skills, especially in the interactive aspects, still requires a more innovative and adaptive approach (Tugiah et al., 2022).

In general, students' views on the application of information and communication technology (ICT) in learning show diversity. This is influenced by various factors, including the extent to which they perceive the benefits of the technology, the challenges faced during

its use, and the level of individual readiness in adapting to digital devices and applications in the educational environment. For some students, ICT provides convenience in accessing information and enhancing interaction in the teaching and learning process. However, for others, limitations in technology skills or certain technical barriers may be a challenge. This combination of perceived benefits and experienced barriers creates a spectrum of varying perceptions among students.

CONCLUSIONS AND SUGGESTION

The integration of Information and Communication Technology (ICT) in education, especially in hybrid learning environments, provides many benefits such as improving time management, self-discipline, and student independence. The flexibility of accessing learning materials supports more efficient study planning. While students are generally comfortable using ICT for communication, there are limitations in fully online English learning, as this process requires verbal interaction and immediate feedback. Therefore, a balance between online and face-to-face learning is needed, especially in language learning that requires active participation.

Despite technical challenges such as poor internet connection and inadequate devices, ICT still plays an important role in supporting student collaboration through group discussions and project-based activities. To ensure the effectiveness of ICT, adequate infrastructure and digital skills training are required. Educators also need to balance the use of technology and hands-on interaction to develop specific skills, especially in language learning. Thus, ICT can have a positive impact in improving the overall educational process and experience.

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*Corresponding author

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