

The Utilization of Digital Technology for English Literacy Improvement in Islamic Senior High Schools

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ABSTRACT

The utilization of digital technology is perceived as significant in the English learning process. This research aimed to investigate the utilization of digital technology for English literacy improvement among Class XII Islamic senior high school students. A mixed-method approach was applied by involving 60 students with purposive sampling. The results showed that Islamic senior high school students (Madrasah aliyah) spent an average of 1 to 3 hours a day using digital technology platforms, used YouTube the most frequently, trained their English by singing along to videos accessed from digital technology platforms, and used digital technology in an autodidactic manner. Contradictorily, most respondents claimed they seldom utilized digital technology for English-language content conversation. Moreover, the result revealed six benefits of adopting digital technology for English language literacy, compared to 6 drawbacks. The conclusion is that digital technology is relevant for English learning.

Keywords:

Digital Technology; English Literacy; Islamic Senior High School Student.

ABSTRAK

Penggunaan teknologi digital dipandang signifikan dalam proses belajar Bahasa Inggris. Tujuan penelitian ini adalah mendalami pemanfaatan teknologi digital untuk meningkatkan literasi Bahasa Inggris siswa Madrasah Aliyah kelas XII. Penelitian ini menggunakan pendekatan metode campuran melibatkan 60 siswa berdasarkan purposive sampling. Hasil penelitian menunjukkan bahwa rata-rata siswa madrasah aliyah menghabiskan 1 sampai 3 jam untuk mengakses platform teknologi digital di setiap harinya,

paling banyak siswa menghabiskan waktu untuk mengakses platform Youtube, siswa melatih Bahasa Inggris dengan cara menyanyi mengikuti video yang diakses di platform media digital, dan siswa memanfaatkan teknologi digital dengan cara otodidak. Sebaliknya, mayoritas responden-siswa menyatakan bahwa mereka jarang memanfaatkan teknologi digital untuk percakapan mengandung konten Bahasa Inggris. Selanjutnya, hasil penelitian juga mengungkap 6 keuntungan mengadopsi teknologi digital untuk literasi Bahasa Inggris, dibandingkan sebanyak 6 kekurangan pemanfaatannya. Kesimpulannya adalah teknologi digital relevan untuk diterapkan dalam pembelajaran Bahasa Inggris.

Kata kunci:

Teknologi Digital; Literasi Bahasa Inggris; Siswa Madrasah Aliyah/Sekolah Menengah Atas.

1. Introduction

Digital technology use has risen swiftly to a significant extent. Digital technology tools could have a positive influence on education (Figaredo & Jaurena, 2024). It has become commonplace in language learning. It allows language learners to access a personalized learning atmosphere by optimizing mobile-assisted language learning (MALL), virtual reality (VR), and game-based language learning (Chen, 2022). This study concerns mobile-assisted language learning, later called digital technology platforms. A broad spectrum of digital technology tools is used, which includes interactive whiteboards, mobile devices, computers, the internet, and robots. Subsequently, the utilization of digital technology globally is altering language skills, and its utilization is steering towards promising and offering opportunities (Maahs, DeCapua, & Triulzi, 2025). In English language learning, digital technology is also needed to support students' language learning at school. Digital technology strengthens students' critical thinking skills (Fadli, Mujazi, Syofyan, & Rosyid, 2024). However, to improve schools with digital technology, all elements should be included in the evaluation and development process (Ilomäki & Lakkala, 2018). Even pre-service teachers and early career teachers (ECTs) are also suggested to have digital competence (Cervera, Usart, & Cantabrana, 2022; Masoumi & Noroozi, 2023). In consequence, teacher-educators also need to develop digital competence beyond the teaching profession, and since digital technology is an integral part of teachers' routine at school (Nagel, 2025; Selwyn, Nemorin, & Johnson, 2017). By developing digital technology for pedagogical use in the classroom, it can support the students' learning, and most importantly, the teachers have a critical awareness of reasoning on the digital technology in the teaching and learning process (Elm & Liljestränd, 2024). Furthermore, digital technology is also necessary to be applied at the university student level (González, López, Calle-Arango, Montenegro, & Clasing, 2022). In brief, digital technology plays an important role in the English learning process, notably in terms of English literacy improvement.

It is a core point to settle the English literacy skills ahead the digital technology. Literacy skills are urgently required in the unavoidably great wave of English as a global language (Siregar, Suadi, & Hanida, 2021). The effort to improve English literacy (at school), the first thing to do is to create an active English language practice environment (Malau, Sigiro, Pardede, Munthe, & Sinurat, 2022). Furthermore, the student's English literacy skills are critically essential from an early age, including basic literacy competence such as reading and writing (Muharromah & Mahmud, 2023). Students' English literacy skills not only give positive vibes on students' achievement but also lead to a significant optimism and transformation toward attaining a bright future by possessing the English skill for competing in both academic and work spheres.

The problem is that Indonesians' English skills are generally far from ideal. A study by EF EPI (English Proficiency Index) in 2021 released data on the position of Indonesians in English mastery was in the 80th over 112 countries around the globe. At the same time, it was 5th in ASEAN, which is outperformed by Singapore in the 4th rank in the world, Philippines (18), Malaysia (28), and Vietnam (66) (EF EPI, 2021). It shows that Indonesians' English literacy skill has a tremendous issue to overcome urgently. Hence, digital technology is considered relevant to be a concrete solution.

This study is concerned with how the students utilize digital technology for English literacy improvement and how they perceive the use of digital technology for English literacy improvement. This study provides a complement to prior studies. Previous study had investigated the role of digital media in enhancing English language proficiency among fifth-semester students at a university where digital technology during English learning advantageously could minimize the cultural stress potential, academic barriers, and unfavorable feelings when confronted by foreign learners on online media (Meidasari, 2016), meanwhile this study focused on how far the digital technology utilization in English literacy improvement and how students perceived about it. In addition, the research participants differed, where the predecessor study involved university students, while this study involved Grade 12 students of an Islamic Senior High School in Indonesia. Furthermore, this current study investigated how far the digital technology used by students and how they perceived it for English learning in general, meanwhile previous studies scrutinized the impact of digital technology use in language learning (Kanoksilapatham, 2022) vocabulary mastery (Haidari, Baysal, & Kanadli, 2020) speaking performance (Hoesny, Setyosari, Praherdhiono, & Suryati, 2024) creative writing (Göçer Demirel, Demirtaş Tolaman, & Azizoglu, 2023) academic performance (Toktamysov, Alwaely, & Gallyamova, 2023) and benefits in English learning (Hidayat, Lee, Mason, & Khaerudin, 2022).

Indonesian students of Islamic senior high schools or *Madrasah Aliyah*, during digital technology utilization, are confronted with myriad alternatives of digital technology platforms for advancing their English literacy skills. Prior studies had revealed the positive impact of learning English by utilizing digital technology, by using KakaoTalk and YouTube (Jeong, 2023) instagram (Nasution, 2023) facebook (Halijah & Alpiyana, 2022; Vanek, King, & Bigelow, 2018) twitter (Blattner & Dalola, 2018) voice-based AI Chatbox (Koç & Savaş, 2024) mobile device assisted-listening (Shahipanah, Khajavy, & Elahi Shirvan, 2024) ChatGPT (Haq, Cao, & Abukhait, 2025) and Tiktok (Hasby & Angrum, 2023). This study examined how the students used them during the English

learning process, such as their duration, the most used digital technology platforms, the way of learning English from the digital technology platforms, and the habit of practicing English via digital technology. These aspects are considerably challenging and take into account in improving English skills. Although both predecessor studies and the successor one have the same topic within the frame of digital technology in English literacy improvement, the recent study also tries to provide a fresh and more detailed perspective of the utilization of digital technology for learning the English language. At this point, the recent study offers a research novelty on how far the students of Islamic senior high schools use digital technology to enhance their English literacy skills.

Based on the background above, this study has two research questions as the main problem: (1) How do the students use digital technology for English literacy improvement? (2) How do the students perceive the use of digital technology for English literacy improvement? Subsequently, the objectives of this study were to reveal how far the digital technology utilized by students to enhance their English literacy skills, consisting of listening, speaking, reading, and writing skills, and to investigate their perceptions about the use of digital technology platforms for improving English literacy.

2. Methods

2.1. Research Design

A mixed-method approach was applied during this study's completion. The approach is executed by concatenating a qualitative and quantitative method to unmask a comprehensive understanding of particular study points. A mixed-method research combines qualitative and quantitative methods to reveal a far more comprehensive perspective of a study than when using only a single approach (Creswell, 2014). In addition, Creswell (Creswell, 2014) emphasized that the discrepancy between qualitative and quantitative methods in a mixed-method approach is the area of a process dominated by words' utilization (qualitative, or employing open-ended questions) rather than numbers implementation (quantitative or applying closed-ended questions). It is in line with this study's necessity for maximizing the point revelation of the study. Accordingly, this study utilized both closed-ended questionnaires for the quantitative method and open-ended questionnaires for the qualitative method. Farooq (2018) asserted that the respondents are unrestrainedly expressing their responses based on their perspectives via an open-ended question approach. In contrast, in a closed-ended questionnaire, the respondents are narrowed and guided to respond to the given questions. Additionally, simple quantification in percentages was applied to support quantitative data on the students' use of digital technology platforms during English literacy improvement.

2.2 Population and Sample

The population of this study was 1.904 students of grade XII from three different senior high schools and three different locations. Each represented a particular area, consisting of the province's

capital city, the regency's capital city, and the district's capital city. This study took place in Sumatra Utara Province.

In taking samples, purposive sampling was applied. Purposive sampling aims to enhance the rigor of the study and trustworthiness (Campbell et al., 2020). This purposive sampling was employed to obtain the data from selected participants who represented the whole and had the characteristics to be a parameter of the entire population (Friday & Leah, 2024). The samples selected in this study were 60 student respondents (20 student respondents for each school). The characteristics of the selected 60 XII-grade students-respondents as samples were: (1) they were considered to have sufficient experience of learning English in the previous time, precisely 5 years since classes 1, 2, and 3 at junior high school, and then classes X and XI at senior high schools. (2) They were considered active users of digital technology platforms because they are categorized as Gen Z, familiar with digital platforms that label them *digital natives*. (3) They represented the diversity of academic rank in the classroom, namely 1st, 5th, 10th, 15th, and 20th.

2.3 Data Collection

Data collection was conducted by distributing two kinds of questionnaires as instruments, namely, 1) a closed-ended questionnaire and 2) an open-ended questionnaire. Before being distributed, content validity was conducted where the instruments had been evaluated, validated, and revised based on the experts' suggestions and recommendations, with further advancement and adjustment, including modification, deletion, and addition. First, a closed-ended questionnaire consisted of 5 items of questions were designed with the format of closed-ended questions to gain strict data on the use of digital technology for English literacy enhancement. The data from the closed-ended questionnaire were statistical and refined into percentage forms to give a comprehensive picture of how Islamic senior high school students used digital technology to improve English language literacy. Second, the open-ended questionnaire contained five questions designed in the format of open-ended questions to gain further information from student respondents about their perception of using digital technology for English literacy development.

2.4 Data Analysis

The obtained data from the closed-ended questionnaire were ultimately organized, classified, tabulated, and analyzed quantitatively by describing statistics as percentages. Moreover, the excerpts of open-ended questionnaire results were qualitatively elaborated to support previously mentioned quantitative data. Both were displayed based on the aforementioned design stages within particular, separated themes to answer the research questions.

3. Results and Discussion

3.1 Students used digital technology for English literacy improvement

Based on the data analysis results, several key points are displayed concerning the duration of using the digital technology platforms for English literacy enhancement. The duration the student-respondents spent on digital technology platforms seems diverse. Nonetheless, some of them spent

7-9 hours, it has a connection to a study disclosed by *Asosiasi Pengguna Jasa dan Internet Indonesia* (APJII) which revealed a fact that during 2012-2018 there were 143 million people spent 7 hours for every single day for internet and this could trigger a dangerous risk of nerves damage on the human body, psychological effect, and visual impairment (Tashandra & Wisnubrata, 2019). See the Table 1 below for further information.

Table 1. The Duration of Using Digital Technology Every Day

Duration	Number of respondents	Percentage
1-3 hours	25	43%
4-6 hours	19	31%
7-9 hours	10	17%
10-12 hours	3	5%
13-16 hours	3	5%
17-20 hours	0	0%
More than 21 hours	0	0%
Total	60	100%

Besides, most respondents admitted using YouTube to learn English, unlike the users of Instagram, Twitter, and other websites/learning or applications such as *Duolingo, Elsa, etc.* Despite diverse preferences in digital technology platforms utilization, all kinds of digital technology have a breathtaking impact on students' English learning atmosphere, as stated in the previous studies, such as the use of digital technology, KakaoTalk, and YouTube (Jeong, 2023) instagram (Nasution, 2023) facebook (Halijah & Alpiyana, 2022; Vanek et al., 2018) twitter (Blattner & Dalola, 2018) and Tiktok (Hasby & Angrum, 2023).

Table 2. The Most Frequently Used Digital Technology Platforms

Kind of Platforms	Number of respondents	Percentage
YouTube	20	33%
Tiktok	16	27%
Instagram	6	10%
Twitter	5	8%
Websites/Sites	3	5%
Other applications like <i>Duolingo, Elsa</i>	10	17%
Facebook	0	0%
WhatsApp	0	0%
Total	60	100%

This proved that digital technology has a role in improving English literacy. Digital learning (IDLE: Informal Digital Learning of English) has a robust effect on English as an international language (EIL) (Lee & Lee, 2019). Moreover, digital technology is also an integral aspect for learners because it elevates the quality of students' learning (Henderson, Selwyn, & Aston, 2015). Regarding English learning, digital technology is quite flexible in different ways. Respondents utilized it to support their efforts to elevate their English literacy skills. This aligns with a previous study, which

reveals that digital technology in the classroom can provide many possibilities for teaching, learning, and assessment (Feerick, Clerkin, & Cosgrove, 2022). Furthermore, these findings are compatible with previous studies where digital technology can improve English language learning (Hidayat et al., 2022; Kanoksilapatham, 2022). The following Table 3 presents more information in detail.

Table 3. The Way (s) of Utilizing the Digital Technology Platforms

Learning method	Number of respondents	Percentage
Online learning (<i>ruang guru, eng breaking</i>)	18	30%
With friends	11	18%
English community/club	0	0%
Autodidactic	22	37%
Under the teacher’s guidance	9	15%
Total	60	100%

Digital technology is a must for everyone nowadays, notably for students. The use of digital technology can strongly drive students to open beneficial horizons. Digital technology, as found in Jaya & Nurqamarani (2023)’s study can support students’ participation in the learning process, shift their motivation and persistence, and increase their self-confidence. Moreover, integrating technology in Education, including AI, can accelerate the transformation of learning towards a more personalized and adaptive experience (Hendrawan, Anggraeni, Silah, & Anwar, 2024). For instance, during online learning, students felt freedom in learning and more independent in accessing educational materials from many sources related to English learning. This leads them to be self-practice when away from their teachers, to practice speaking with digital technology support. This is compatible with the previous study (Hoesny et al., 2024) That revealed the essential role of digital technology can helping skyrocket students’ specific speaking performance aspects such as grammar, comprehension, and vocabulary.

The findings revealed that students used the digital technology platforms to practice English. They have accomplished some ways, and it implies that they practically and appropriately utilized it based on their passion, interest, and hobby. The Table 4 below shows how students practice English through digital technology utilization.

Table 4. How to Practice English with Digital Technology

Way (s) of Practice	Number of respondents	Percentage
Direct practice	19	32%
Singing following the song in the video	28	46%
Playing the guessing games	10	17%
Other ways, such as the conventional method of reading and listening to English, and then translating it into English	3	5%
Total	60	100%

Students practiced diverse ways to develop English literacy. This has something to do with a study done by Muchlis et al (2022) Who stated that quality human resources must be developed by equipping them with myriad capabilities in information technology mastery? In addition, by incorporating technology in learning, educational institutions provide opportunities for students to become independent learners who can adapt to dynamic global developments (Ilham, Rahman, Kholid, & Sari, 2024). As illustrated in Table 4, students did things to improve their English language skills. By way of direct practice, singing following the videos accessed on digital platforms, playing guessing games, and games about reading and translating, students cannot only make their English skills positively increase, but also prospectively lead their academic performance to have positive progress, as stated in a prior investigation conducted by Toktamysov (Toktamysov et al., 2023). Moreover, students can increase their listening skills by listening and singing along to the song in the video on digital technology platforms.

The responses obtained from 60 student respondents were varied. Dominantly, the respondents filled the questionnaire with the response '*infrequently*'. Moreover, A great number of respondents stated never. The frequency of discussing English material via digital technology will affect the students' English mastery. In contrast, they utilize it infrequently. This finding is opposite to a previous study done by Malau et al (Malau et al., 2022) who asserted that English literacy improvement needs practice and needs language environment. In consequence, students also need motivation from their teacher regarding a conducive learning environment where the teachers are grouped in a teacher learning group (Teunter, Vries, Sins, & Vermeulen, 2024).

3.2 *Challenges experienced by teachers in instructional delivery in the post-pandemic era*

Summarizing the results of the open-ended questionnaire, there are some benefits of using digital technology for English learning. Positive impacts are refined as follows.

- a. Supporting the English learning process
- b. Enhance communication skills in English
- c. Easy to access by anyone, anytime, and anywhere.
- d. Effective, flexible, affordable, and fun
- e. Enabling an individual to self-study without a teacher/instructor's guidance
- f. Anyone can directly practice English with foreigners and native speakers.

One of 60 student respondents, identified as respondent 1 (R.1), described as following narratives:

(Digital technology) helps to learn the English process so that the pronunciation of English words is much easier (R.1).

In addition, some respondents unveiled that using digital technology offers ease, accessible anytime and anywhere by anyone, significantly assists an individual in understanding the meaning of a certain vocabulary, is fun, affordable, efficient, etc. This finding is in line with a previous study where digital technology helps students to enhance vocabulary mastery (Haidari et al., 2020). The difference between the previous study and this current one is that the previous study used online and offline technological tools such as online and offline dictionaries, multimedia, social media, television, computer, smartphones, tablets, and similar others. Meanwhile, this current one only digs

into information about students' perceptions. Their perspectives were thoroughly recorded on the open-ended questionnaire sheet as follows:

Digital technology offers advantages for learning English, which can be accessible anytime from anywhere and by anyone (R.16).

Via digital technology, a learner can acquire new vocabulary and meaning. It is making the English skills more fluent (R.17).

We understand English much better, and our communication skills in English have been greatly improved via utilizing digital technology with others (R.4).

It is fun learning with games available on digital technology platforms (R.7).

It is helpful for anyone who prefers learning through the autodidactic method (R.7).

Some student respondents also concluded that digital technology platforms bring a new atmosphere to learning English. This is consistent with the previous study, which reveals digital technology's positive impact on English skill improvement, for instance, minimizing academic barriers and anxiety when interacting with foreigners in the English language. It allows a learner to be involved in communication in English with foreigners, low cost, efficient in time consumption, and affordable (Meidasari, 2016). In addition, digital technology platforms supported the English learning process, both motivation and interest in learning (Rispatiningsih, 2022). Regarding that, some student-respondents confirmed the answer to the open-ended questionnaire sheet, writing:

(Digital technology) allows people to learn English through direct practice with foreigners, and to widen a wide horizon via online learning (R.18)

(Digital technology) is considered affordable, low cost, saving energy, and prominently helpful due to being accessible anytime from anywhere by anyone (R.21)

Furthermore, digital technology not only proposes positive impacts but also unavoidably causes negative impacts. In general, some student respondents expressed their experiences of using digital technology platforms in the responses to the open-ended questionnaire sheet as follows:

- a. Rude (dirty) English language
- b. Individualism and anti-social
- c. Gadget addict
- d. Online crime potentials such as online gambling, pornography, etc
- e. Many advertisementsPotentially threatening to displace the Indonesian language.

Everyone unrestrictedly accesses digital technology. There is no limitation to counter impolite language. At this point, learners are exposed to the rude English language, which is dangerous to practice in communication. In addition, digital technology gets people accustomed to spending much time being alone, focusing on their gadgets, and at the same time neglecting their surroundings, including social life. This drives people to individualism and into a social lifestyle. Moreover, spending much time on digital technology without any restrictions could lead people to become addicted. The worst thing is when a learner is out of the monitoring of their parents and teachers, they can probably be contaminated or be a victim of online crimes. Furthermore, advertisement overwhelms and threaten on Indonesian language being displaced. Predecessor research has also discussed this, namely, a study by Kanoksilapatham (Kanoksilapatham, 2022) who discovered the detrimental effects of digital technology, which allows learners to manage their learning inadequately (Kanoksilapatham, 2022).

English learning obstacles within digital technology utilization become a challenge for everyone. The obstacles student-respondents faced during English learning by digital technology utilization, based on the results of the open-ended questionnaire, were formulated as follows:

- a. Internet connection problem
- b. Internet data
- c. Lack of focus
- d. Repeatedly advertisements attack

Internet connection problems, data, and lack of focus hindered improving English literacy skills. The peak hindrance in implementing based on digital technology is online signal error, and not everyone has internet issues or a bad signal. This was mentioned in the previous study. These obstacles are clearly stated by student respondents in their answers in the following excerpt:

Internet connection is frequently disconnected (R.15)

Always out of internet data (R.23)

We cannot focus and cannot be consistent because of the advertisement attack that makes us miss the boat during the teaching-learning English process (R.34)

The English teaching-learning process, conventionally via a face-to-face class setting, is unlike learning English through digital technology, which is dominated by online platforms. Notwithstanding, by digital technology utilization, learners can not only be involved in online learning in real time synchronously, but also can be active in virtual class asynchronously without being hindered by time, place, and any other conditions (Suadi, 2021). Most student respondents assumed that learning English in an offline setting is better than an online one. Only a minority of them demonstrated that the online learning mode is better. Those who expressed that an offline learning system is much better outlined five factors as follows:

- a. Study with a teacher face-to-face in a real class setting
- b. Can directly ask and discuss with friends
- c. Positive interaction between teacher and students

Some student respondents, who preferred the offline learning system to online, in their statements on the open-ended questionnaire sheet, mentioned that the offline learning system offers a face-to-face class setting with the presence of both teacher and students. In addition, it also supports students to ask a certain material to a friend when they do not understand yet. Moreover, this system advantageously builds a positive bond during interaction between teachers and students.

It is better to learn English. with teacher in real class (offline) (R.3)

Learning in a class setting is more beneficial because we can ask our friends directly when having trouble understanding the lesson (R.5)

Learning English in a real class atmosphere is recommended to develop teacher and student interaction. Moreover, it also contributes to learning effectiveness (R.6).

Some student-respondents preferred the offline learning system to the online one because the contemporary learning method is back to the conventional class setting due to the end of COVID-19 measures. Nonetheless, when retrieving students' responses on the use of digital technology, they gave a positive image of it in dealing with English literacy enhancement. It means they prefer offline class settings for learning English; simultaneously, they utilize digital technology platforms to support their progress and improve their English literacy skills. Eventually, the thing that must be taken care

of is that all technologies rapidly grow, develop, and give effect to extend and diversify local literacy and language practice (including English literacy) (Cruickshank, 2004).

Based on the questionnaire results, digital technology platforms are needed for learning English at school by considering these points:

- a. Simple to learn English
- b. Fun
- c. Providing games for learning English
- d. A destination for deepening and understanding a certain material that cannot be understood in the classroom.

During information technology, notably digital technology, learning atmosphere, Students-respondents who tend to use digital technology are relevant and needed to apply at school during the English teaching-learning process claimed:

It is easier to learn and to access (English) (R.6).

(By digital technology platforms) learning English is fun, not boring, and easy to understand (R.21).

Yes, many positive things (in using digital technology) occur during learning. Some of them allow students to choose material suitable to their ability and level, and available games for learning English, such as guessing games. It also helps the teacher control and monitor the students (R.33).

Yep, when I do not understand the material given by the teacher in the classroom, I go to digital technology for a clearer explanation (R.44).

The reason digital technology is needed is that an individual can access and apply digital technology for English literacy improvement by utilizing the digital features available (Hidayat et al., 2022). In addition, it is needed due to English literacy is not only about the ability to read and write, but also competence in visual image, design, multimedia, etc (Loring, 2017).

On the other hand, digital technology is also considered irrelevant and does not need to be integrated into the English teaching-learning process at school. This is caused by the presence and role of the teacher in the classroom. Moreover, effective teaching is viewed through the teacher's capacity to boost and encourage learners' confidence to express their ability to read and write independently (Lim & Torr, 2018). There are some points refined from the results of the open-ended questionnaire in this study as follows:

- a. The teacher has explained and taught at school, so digital technology is no longer necessary
- b. Having been supported by English textbooks and a dictionary in class
- c. Digital technology platforms cannot give responses as quickly as teachers.

The points above tackle the important role of digital technology in teaching-learning, especially in English learning. The points sound rational due to concrete conditions. The most essential point is that Learning inevitably brings benefits to learning English because it offers low-budget means for learning and can access continuous support and connect with their peers (Lewin, Smith, Morris, & Craig, 2019).

3.3 Discussion

In the first findings, four notable points were revealed. They were (a) the duration of the use of digital technology in daily life by Islamic senior high school, (b) the most frequently used digital

technology platforms, (c) the ways of digital technology platforms utilization, and (d) the way the students practice English by using digital technology platforms. Based on the first point of the first findings, 43% of student-respondents dominantly spent an average of 1-3 hours on digital technology platforms utilization. In addition, 31% allocated 4-6 hours and 17% consumed 7-9 hours. This means students actively used the digital technology platforms from normal to danger/warning ranges. Compared to the remaining respondents, the worst fact was unmasked; 5% spent 13-16 hours, and the other 5% wasted 17-20 hours. This finding shows an empirical novelty not found in the previous studies. Besides, this finding strengthened an alert of digital technology utilization, especially internet use by *Asosiasi Pengguna Jasa dan Internet Indonesia* or APJII (Association of the Users of service and internet Indonesia) that stated 143 million Indonesians, during the years of 2012-2018, allocated 7 hours each day for internet. Subsequently, as stated by Tashandra & Wisnubrata (Tashandra & Wisnubrata, 2019) In terms of health, using the internet over time can cause dangerous risks to human nerve damage in the body, psychological effects, and visual impairment.

The second point of the first findings of this study also revealed majority of students used YouTube (33%), TikTok (27%), Instagram (10%), Twitter (8%), and other English learning platforms such as *Duolingo* and *Elsa* (17%) in learning. This finding is in alignment with a previous study, which was conducted by Jeong (Jeong, 2023), Nasution (Nasution, 2023), Halijah and Alpiyana (Halijah & Alpiyana, 2022), Blattner & Dalola (Blattner & Dalola, 2018), and Hasby & Angrum (Hasby & Angrum, 2023). The difference is, this current study concerning on the digital technology platforms use and its benefit for English literacy improvement, meanwhile the previous study focused on specific platforms in digital technology for instance Youtube for language learning and boosting students' motivation (Jeong, 2023), Instagram for specific language learning including vocabulary, writing, grammar and collaboration atmosphere (Nasution, 2023), facebook for increasing students' motivation in learning English including students' interest, attention, readiness and self-condition (Halijah & Alpiyana, 2022), facebook also stimulate students to engage in social, academic and identity work (Vanek et al., 2018), Twitter for facilitating students' cultural enrichment in language learning including socio-pragmatic awareness and developing multi-literacy skills (Blattner & Dalola, 2018) and Tiktok for learning English modernly (Hasby & Angrum, 2023). The current study pointed out the research variable novelty, which tried to provide a comprehensive picture of students' habits in using digital technology on all platforms in the English learning process, compared to a previous study, which highlighted specific platforms for English learning.

The third point of the first findings unveiled how students utilized digital technology platforms for improving English literacy. Most of the student-respondents (37%) use the digital technology platforms autodidactic. They learned, adopted, adapted, and used the platforms by themselves. The second biggest number (30%) was by following the tutorial content of online learning such as *Ruangguru*, *Eng Breaking*, and the like. Friends or classmates also played a crucial role in teaching student-respondents (18%) to operate the platforms. Previous studies found differently. Hendrawan, Anggraeni, Silah and Anwar (Hendrawan et al., 2024) Found AI platforms, particularly ChatGPT, can help students improve their learning achievements. This study put the teachers as facilitators for students to independently use the AI platform ChatGPT for learning support. Another previous study conducted by Hoesny, Setyosari, Praherdhiono, and Suryati (Hoesny et al., 2024) Emphasized using

digital tools independently, where the lecturer was a facilitator. This finding shows a methodological research gap where this current study employed a mixed method combining simple quantification supported by percentages by involving 60 student-respondents using purposive sampling, meanwhile previous study used a quantitative approach using random sampling and multiple linear regression to assess the influence of AI tools (Hendrawan et al., 2024) and applied a quasi-experimental design with pre-test and post-test involving 80 students via random sampling (Hoesny et al., 2024).

Moreover, Student-respondents (15%), who did not know how to operate the platforms, came to their teacher for guidance. However, teacher(s) cannot afford students' requests to use digital technology platforms without being well-equipped with digital technology competence. At this point, teachers must have adequate competence in digital technology. This finding is in alignment with a prior study, which pushed the educational institutions to continue to develop teacher training about the use of resources to carry out adequate tutoring actions and thus increase the diversification in the use of resources of ICT (information and communication technology), including blogs, Facebook, WhatsApp, Twitter, and ClassDojo (Gámez, Valenzuela, Ramos, & Fernandez, 2022). The novelty in this study is empirical novelty, which the current study discusses about how students used the digital technology platforms, meanwhile the prior study outlined a need to improve teachers' digital technology competence.

The fourth point of the first findings unmasked how the students improved their English literacy using digital technology platforms. Most respondents (46%) learned English by singing a song following the song available in the video of digital tools. Moreover, the second majority student-respondents (32%) applied direct practice, either using digital platforms or without them. Game, especially playing Guessing Games, was also chosen by many students for learning English. This finding aligns with the previous investigation conducted by Putri (2024), who found that English songs can help improve English learning. The difference is that this current study concerns many aspects, not only English song, including playing games, direct practice, and conventional learning way. In contrast, previous studies only shed light on English song and its influence on students' English language improvement.

In the second findings, namely students' perceptions on the use of digital technology tools on English literacy improvement, revealed six positive impacts and at the same time 6 negative impacts. The six positive impacts of digital technology on English literacy improvement successfully revealed are; 1) supporting the English learning process, 2) enhance communication skills in English, 3) easy to access by anyone, anytime, and anywhere, 4) effective, flexible, affordable, and fun, 5) enabling an individual to self-study without a teacher/instructor's guidance, and 6) anyone can directly practice English with foreigners and native speakers. This finding is in alignment with three previous studies, which emphasized the positive impacts of digital technology on the foreign language learning process (Bećirović, Čeljo, & Delić, 2021) providing knowledge, information, a mentor, and an assessor (Haleem, Javaid, Qadri, & Suman, 2022) and serving digital or electronic dictionaries, digital books, and helping learners to improve their foreign language learning by using appropriate movies (Ghfar, Lestari, & Cahya, 2023). Prior studies and this current study show a methodological gap. This current study allowed students to give their perceptions on the use of digital technology on English literacy improvement with a mixed method by quantitative and qualitative approaches. Meanwhile, the study carried out by Bećirović, Čeljo, & Delić (2021) emphasized on quantitative approach, and Haleem,

Javaid, Qadri, & Suman (2022) and Ghafar, Lestari, & Cahya (2023) employed a library research approach.

The utilization of digital technology is not only crucial for students in senior high school, but also at the primary school level (Gámez et al., 2022) university/higher education level (Lacka & Wong, 2021; Ntshwarang, Malinga, & Losike-Sedimo, 2021) even 0-6 years old children (Bang, Setoguchi, Mackey, & Fujii, 2024; Mathers et al., 2025; Taylor, Sala, Kolak, Gerhardstein, & Lingwood, 2024). Consequently, adopting and applying the digital technology platforms is relevant for students who are considered digital natives and familiar with them. Although students, teachers, and lecturers keep realising the conventional English teaching method, digital technology will inevitably replace it due to its rapid growth worldwide.

The negative impact of the use of digital technology was: 1) rude (dirty) English language, 2) individualism and anti-social behavior, 3) gadget addict, 4) online crime potential such as online gambling, pornography, etc, 5) many advertisements, 6) potentially threatening to displace the Indonesian language. This finding is in alignment with previous work, which revealed the drawbacks of digital technology use in language learning, namely that digital technology can lead to more time consuming, isolate people from society, and make students less interested in foreign languages (Ghafar et al., 2023) revealed cost of technology (Mohamad, Asnawi, Kadir, & Darmi, 2022) privacy concern and distraction from the novelty of technical issues when operating/using technology (Huang & Li, 2024). The research gap between this current study and predecessor studies is different drawbacks revealed as mentioned previously. Moreover, the participants and methodological approach were also different, where the current study employed a mixed method: a combination of quantitative and qualitative methods by involving 60 students as respondents via purposive sampling, meanwhile previous study used a quantitative method via a survey design involving 85 respondents (Mohamad et al., 2022), the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) approach (Huang & Li, 2024) and library approach (Ghafar et al., 2023).

Notwithstanding, this study tried to explore the students' habits in using digital technology in English literacy improvement and to unmask their perceptions about using digital technology platforms in the English learning process. The digital technology platforms can play as an extra tutor or extra teachers for students who need more guidance, constructive feedback, and positive comments for their improvement, including in the English literacy improvement process because feedback is recognized as a fundamental component and one of the most influential factors in teaching and learning (Bock, Thomm, Bauer, & Gold, 2024; Christiansen, Calvert, & Morris, 2024).

4. Conclusion

The findings of this study were twofold, based on research questions. First, how students use digital technology for English literacy improvement, consisting of; 1) The duration of using the digital technology every day where the dominant number of students used digital technology for English improvement between 1-3 hour per a day, 2) The most frequently used digital technology platforms are Youtube (33%), Instagram (10%), and Tiktok (27%). 3) The way (s) of utilizing the digital technology platforms; most of the students preferred an autodidactic manner (37%). 4) How to practice English by digital technology, most students sing a song using available content on YouTube

(46%). Second, how students perceive the use of digital technology for English literacy improvement, based on findings, students perceived that digital technology has benefit as follows: 1) supported the English learning process, 2) Enhance communication skills in English, 3) Easy to access by anyone, anytime, and anywhere, 4) effective, flexible, affordable, and fun, 5) Enabling an individual to self-study without a teacher/instructor's guidance, and 6) anyone can directly practice English with foreigners and native speakers. In contrast, students perceived as follows: 1) rude (dirty) English language, 2) individualism and anti-social, 3) Gadget addict, 4) Online crime potentials such as online gambling, pornography, etc., 5) many bothering advertisements, 6) Potentially threatening to displace the Indonesian language.

This study aims to provide a comprehensive picture of the utilization of digital technology for English literacy improvement. Unmasked findings can answer the main problems formulated in the research question. Digital technology is ubiquitous and unavoidable for teachers, students, and society. Nevertheless, the positive impact and right use will hopefully steer the users: children, students at school and university, teachers, lecturers, academics, and the public into beneficial digital technology digitalization in teaching, learning, and daily life issues. Accordingly, by being active in digital technology utilization, it unnoticeably turns people into global citizenship (Fleşeriu, Lifintsev, Jerónimo, & Tamulevičiūtė-šekštelienė, 2023).

This study hopefully can bridge an interdisciplinary divide between digital technology and English literacy development in recent times. To provide stronger evidence in terms of the use of digital technology for English literacy improvement, the upcoming high-powered research needs to 1) involve a greater number of participants, 2) explore a larger region representation coverage, 3) reach heterogenous background of participants, and 4) understand the longer-term impact of digital technology utilization for English literacy improvement.

5. References

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