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Digitalization of Education and Its Impact on Urban Society: A Study on Junior High School Teachers

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ABSTRACT

This study aims to determine the impact of digitalization of education on urban society. The Background of this research is that the rapid development of technology and information has resulted in changes in various aspects of life, especially in urban areas. One area that feels the impact is the realm of education. The teacher's ability to provide material accompanied by suitable methods will provide good learning outcomes. The approach in this research is qualitative by using an evaluation method through case studies. This is done by two junior high schools in the Jabodetabek region. The impact of digitalization of education for urban communities is the opening of understanding of teachers and students about the benefits of digital in the world of education. It started the program by making every student aware of the importance of reading through the School Literacy Movement by facilitating students and teachers with libraries. Education is developing in the digitalization of education by encouraging students and teachers to use digital libraries. This effort is strengthened by implementing learning by making digital-based teaching materials, namely by including images, photos and videos in each lesson. One of the teacher's innovations in digital-based learning is to facilitate virtual field trips, where each student can access various interesting information and historical places by using the services of a bolger or guide directly at the destination.

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1. INTRODUCTION

The digital era demands individuals to work quickly and accurately (Roubal, 2015; Syafril, 2019). All aspects of life rely on digital technology. As of 2021, the number of internet users in Indonesia reached 196.7 million people, an increase of 23.5 million or 8.9% compared to 2018 (Vinka & Michele, 2021). The widespread use of the internet has transformed human life, providing individuals with free access to information and the ability to produce information through the internet (Iskandar & Isnaeni, 2019). In the virtual world, barriers such as geographical boundaries, nationality, race, gender, and language differences do not apply.

The role of technology and digitalization has significantly transformed the lives of urban communities (Banowati et al., 2019). Urban communities have easy access to information and the internet due to their fast-paced and individualistic lifestyle and having more opportunities (Calvo, 2020; Muhammad, 2017). Education and learning processes in urban areas have also been affected by the digital era. Digital media has become an effective and efficient tool for individuals to develop their knowledge and insights, locally and globally. Access to various disciplines and information has become easily attainable. However, this is not reflected in the quality of education in Indonesia. The results of the 2018 PISA test ranked Indonesia 70th out of 78 participating countries based on the reading, science, and mathematics abilities of junior high school students (Sutrisna, 2021). The low reading proficiency in Indonesia contrasts with the quality of libraries in the country, which are on par with those in European countries.

The low literacy culture influences the mismatch between PISA results and internet access in Indonesia. Literacy refers to the set of skills and abilities an individual possesses in reading, writing, speaking, counting, understanding what they read, and solving specific problems in daily life (Park et al., 2021; Warsihna, 2016). Literacy not only encompasses reading skills but also critical thinking abilities (Masko et al., 2020). Teachers play a crucial role in developing critical thinking skills by providing teaching materials that align with students' interests and talents (Anisa et al., 2021). Another effort is to develop numeracy skills. Numeracy refers to the ability to apply numerical concepts and computational skills in daily life, such as at home in community work, and the ability to explain information in the surrounding environment (Gupal, 2021; Maulidina, 2019). In developing literacy and numeracy programs, the Indonesian government, through the Ministry of Education and Culture, established the School Literacy Movement (Gerakan Literasi Sekolah or GLS), involving all stakeholders in the field of education. This initiative, based on Ministerial Regulation No. 23 of 2013, aims to help students improve their reading and writing culture both within and outside of school (Rohim & Rahmawati, 2020a).

The low literacy skills among the Indonesian population also affect the quality of information accessed by the public. Fake news or hoaxes have become the most sought-after sources of information by a significant portion of Indonesian society. Hoaxes are news or information that contains unverified or non-factual elements (Juditha, 2018; Pakpahan, 2017). Around 800,000 information sites in Indonesia are suspected of spreading false information (Komsiah, 2021). False information related to religion accounts for 76.20% of respondents in a study conducted by Mastel (Abror & Mhd, n.d.). Issues related to religion, especially those involving SARA (ethnicity, religion, race, and intergroup relations), often contain false information. This is due to the ease of access to religious information through social media platforms such as WhatsApp, Facebook, Instagram, and Twitter. Chain messages on social media groups are highly effective in spreading fake news.

In addition to social media, teachers, particularly those teaching religion, influence the attitudes and perspectives of the community toward religious matters (Nur, 2019). Teachers play a crucial role in promoting literacy skills among students. Efforts made by teachers to develop literacy include organizing various activities to enhance and sustain students' reading interests through textbooks and implementing text-rich teaching methods (Rohim & Rahmawati, 2020). As students become accustomed to developing individual literacy skills, the widespread use of the internet in Indonesia allows access to information on subject matter and other knowledge through digital platforms. This process is referred to as digital literacy (Harahap & Adeni, 2020). Digital literacy is individuals' interest,

attitudes, and abilities in using digital technology and communication tools to access, manage, integrate, analyze, and evaluate information, build new knowledge, and communicate with others effectively within society (Harahap & Adeni, 2020).

Studies on the digitalization of education in urban communities, specifically related to digital literacy, have evolved from early studies on enhancing digital literacy through information and communication technology (Warsihna, 2016). Examples include improving literacy in kindergarten (Munawar et al., 2021), enhancing literacy in elementary schools (Rohim & Rahmawati, 2020), digital science literacy in high schools (Sutrisna, 2021), and the use of digital religious literacy among university students (Mansir et al., 2020). Observing these studies, it becomes clear that educational digitalization can be developed through literacy, which involves incorporating technology into the teaching and learning process. Initially focused on reading, writing, and numeracy skills, literacy has gradually expanded into various domains, such as cultural, religious, social, and scientific. With the advancement of technology in education, digital literacy has become an integral part of the learning process.

The objective of this study is to ascertain the digital literacy-oriented instructional approaches employed in educational institutions for Islamic education within the Jabodetabek region. The research focuses on two specific educational institutions, namely the al-Bayan Islamic School Junior High School located in Jakarta and the al-Azhar Summarecon Bekasi Junior High School. Furthermore, this article will examine the obstacles encountered by educators and educational institutions when incorporating digital literacy into their curriculum, taking into account the educators' poor proficiency in digital abilities. This research aims to examine and evaluate the implementation of digital literacy in educational institutions, with a specific focus on its application in the field of Islamic education, within the context of the digital era.

2. METHODS

This research was conducted at al-Bayan Islamic School Junior High School in Jakarta and al-Azhar Summarecon Bekasi Junior High School. This study utilized a qualitative research method, which is based on the postpositivist philosophy. The qualitative research method is used to investigate naturalistic conditions, employs inductive data analysis, and emphasizes meaning rather than generalization in its findings (Sugiono, 2009). The purpose of qualitative research is to gain a relatively deep understanding and interpretation of the meaning of phenomena in the field. Qualitative research is a research procedure that produces descriptive data in the form of written or spoken words from individuals and observable behaviours (Joyce P. Gall, Meredith D. Gall, & Borg, 2003).

This research employed an evaluation research approach using a case study method. The purpose of a case study is to generate a detailed description of a phenomenon; secondly, develop explanations that can be derived from the case study; and evaluate the phenomena observed. Case studies are commonly used to investigate small social units such as families, school clubs, and youth groups (Joyce P. Gall, Meredith D. Gall, & Borg, 2003). They explain that a case study is defined as research that focuses on an individual case rather than using a specific inquiry method. Case studies are part of qualitative research.

The research subjects of this study are the school principal, the curriculum department, and Islamic Education teachers. The data collection techniques employed in this research include interviews, observations, and documentation. These techniques were chosen because they involve direct participation in the environment or community. Thus, observation, interviews, and documentation were used as alternative data collection methods. The observation was used as a data collection technique to identify and explore data sources, including events, locations, and research subjects. Observation was also employed to identify the challenges faced in addressing the issues. Additionally, observations were conducted during ongoing activities such as learning and work processes. In this study, observations were carried out at al-Bayan Islamic School Junior High School and al-Azhar Summarecon Bekasi Junior High School. It began by directly observing the school environment, including the buildings, facilities, and school grounds. Subsequently, interviews were

conducted with the school principal, the curriculum department, and Islamic Education teachers.

3. FINDINGS AND DISCUSSION

3.1 Impact of Educational Digitization on Urban Communities

Education in the 21st century is not only focused on knowledge but also on the attitudes of learners in developing knowledge (Anisa et al., 2021). The attitudes that should be cultivated and developed include critical thinking, logical reasoning, inventiveness, innovation, consistency, and adaptability in facing life (Sutrisna, 2021). Another important aspect of attitude development is the ability to possess positive character traits (Saihu, 2019). The development of these attitudes is not without reason, considering that in this era, knowledge is not only acquired from teachers and textbooks but also through the convenience of accessing information and learning materials via the internet. Furthermore, the development of artificial intelligence technology reinforces the need for cultivating attitudes in everyday life (Ronzhina et al., 2021).

To be competitive in the current digital era, concrete steps that can be taken include cultivating the habit of seeking information through reading books, newspapers, or social media. The initial step is to develop a culture of literacy among all learners. Literacy culture involves routines that promote reading and writing, enabling individuals to acquire knowledge from reading materials and solve various life problems through literacy. Reading is the initial understanding of literacy.

3.2 School Literacy Movement

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Book Fiction

SMP Al-Azhar 31 Bekasi is an educational institution located in the city centre. It is under the umbrella of Yayasan Syiar Bangsa, which is affiliated with a large corporation, Summarecon Agung. The vision of this educational institution is to foster pious and noble-minded Muslim intellectuals who are physically and mentally healthy, intelligent, skilled, confident, possess strong personalities, have a warrior spirit, and have the ability to develop themselves, their families, and take responsibility for the development of the nation and society. The mission implemented at SMP Islam Al-Azhar is to provide quality education to encourage teachers to have excellent qualifications in the rapidly advancing technological era.

The efforts made by the teachers and the educational institution SMP Al-Azhar 31 Bekasi in implementing teaching practices involve cultivating the habit of reading. The steps taken include assigning tasks to students to seek information and answers based on the reading materials available in the library. The school prepares and provides reading materials consisting of books, magazines, and newspapers. The following table shows the collection of books available in the school library:

No Types of Reading Materials Amount

1 Textbooks 11,563 books
2 Reading Books 678 books (908 copies)
3 Reference Books 176 books

1,030 books (1,369 copies)

Table 1. Data of Book Collection at Al-Azhar 31 Bekasi

Table 2. Collection Data of Books and Magazines at Al-Azhar 31 Bekasi

Type of Collection	Additions		Total Amount	
	Titles	Copies	Titles	Copies
Books			928	1297
Gontor Magazine			22	28
I-Tech Magazine 1			1	47
Info Bekasi Magazine			3	4
Warta Al Azhar Magazine			8	55
Yuk Makan Magazine			3	4
I-Tech Magazine			1	47
Info Bekasi Magazine			3	4
Wart Al Azhar Magazine			15	75
Yuk Makan Magazine			3	4
Kampus Newspaper				30
Republika Newspaper				30
	Books Gontor Magazine I-Tech Magazine 1 Info Bekasi Magazine Warta Al Azhar Magazine Yuk Makan Magazine I-Tech Magazine Info Bekasi Magazine Wart Al Azhar Magazine Yuk Makan Magazine Yuk Makan Magazine Yuk Makan Magazine	Books Gontor Magazine I-Tech Magazine 1 Info Bekasi Magazine Warta Al Azhar Magazine Yuk Makan Magazine I-Tech Magazine Info Bekasi Magazine Wart Al Azhar Magazine Yuk Makan Magazine Kampus Newspaper	Books Gontor Magazine I-Tech Magazine 1 Info Bekasi Magazine Warta Al Azhar Magazine Yuk Makan Magazine I-Tech Magazine Info Bekasi Magazine Wart Al Azhar Magazine Yuk Makan Magazine Kampus Newspaper	Titles Copies Titles Books 928 Gontor Magazine 22 I-Tech Magazine 1 1 Info Bekasi Magazine 3 Warta Al Azhar Magazine 8 Yuk Makan Magazine 1 3 I-Tech Magazine 1 1 Info Bekasi Magazine 3 Wart Al Azhar Magazine 1 1 Info Bekasi Magazine 1 1 Info Bekasi Magazine 1 1 Info Bekasi Magazine 3 Wart Al Azhar Magazine 3 Wart Al Azhar Magazine 3 Kampus Newspaper

Source: Administrative Data of Al-Azhar 31 Bekasi Islamic Junior High School

Table 3. Summary of Non-Print Collection Data at Al-Azhar 31 Bekasi

No	Type of Collection	Additions		Total Amount	
		Titles	Copies	Title	Copies
1.	CD	-	-	17	33
2.	E-Book	-	-	19	19

Source: Administrative Data of Al-Azhar 31 Bekasi Islamic Junior High School

Besides conducting data and book searches in the library, students are also assigned tasks to find online teaching materials. These materials can be in the form of articles, videos, and photos, as well as images related to the subject matter being studied. In addition to searching for materials, each student is given the task of creating materials in the form of PowerPoint presentations, videos using internet applications. Creating materials through internet applications provides new colors and digital skills to students.

The implementation of the school literacy movement consists of three stages: the familiarization stage, the development stage, and the learning stage. The familiarization stage is the stage of fostering reading interest through 15 minutes of reading activities. In this stage, the school can prepare storybooks or folklore that can enhance students' reading interest at school. The development stage aims to enhance literacy skills through enrichment book activities. This stage aims to develop literacy skills such as reading books with proper intonation, writing stories, and discussing materials. The

learning stage is aimed at improving literacy skills in every subject through the use of enrichment books and reading strategies for each subject (Yunianika, 2019).

The results of an interview with NFA, an Islamic Education (PAI) teacher, provide indicators of literacy implemented at SMP 31 Al-Azhar as follows: "Literacy reading indicators include getting to know and knowing the recommended books from the school. Writing literacy indicators involve students expressing their concerns in the form of discussable questions. Religious literacy involves students displaying literacy activities that can be accessed widely. For reading literacy in online Islamic education, from Monday morning before the start of class until Thursday, we read short letters, and once a month, on the last Friday, we complete the recitation of the Qur'an."

Before the lesson begins, the Islamic Education teacher schedules time for all students to engage in literacy (reading) activities. The time provided by the school for morning literacy is 15 minutes, starting from 6:30 a.m. to 6:45 a.m. During this time, students are allowed to read any book, including assistance in recitation, memorization, short storybooks, Islamic history books, folklore, textbooks, and others. There are no restrictions or forces on students regarding the books or readings they choose, so students are free to choose which book they want to read. The books used by students for literacy activities are well-organized and provided by the school. These books are available in well-equipped bookshelves (libraries), making students feel comfortable and at ease during literacy activities.

The availability of reading materials in the school library facilitates students in completing assigned tasks. The effort of teachers in promoting a reading culture through the school literacy movement encourages students to love reading. The availability of various reading materials in the library is a manifestation of the school's commitment to facilitating students in developing a reading culture. Additionally, the availability of various reading materials, including textbooks and books related to stories, biographies, and magazines, is a stimulus carried out by the school to successfully implement the literacy program.

3.3 Digital Literacy Program

Digital literacy is an innovation in education and a necessity (Banowati et al., 2019). The use of digital devices leads to increased productivity and effectiveness in various fields, including education (Reddy et al., 2020). SMP 31 Al-Azhar has developed teaching materials using digital resources to support the school's literacy program. Furthermore, NFA, an Islamic Education (PAI) teacher, explained in her interview that besides using the school library, students are also encouraged to search for materials on the internet, introducing them to digital literacy. Another approach taken by teachers is creating teaching materials using PowerPoint, which incorporates various teaching methods such as lectures, discussions, and visual aids like images, photos, and videos to help students understand the subject matter. Digital literacy is the ability to understand and use information in various forms from diverse sources accessed through computer devices (Dinata, 2021). The competency of teachers in developing both manual and digital teaching materials is essential and is tied to their teaching and learning management skills in the digital era (Esteve-Mon et al., 2020).

The educational institution SMP Islamic School al-Bayan Jakarta also carries out efforts to develop digital literacy. With a vision to become the best Islamic SMP by nurturing intelligent, independent, creative, and globally aware generations, the school has developed its library by providing reading materials as a learning resource. The school library is designed to be visually appealing, with motivational images, words, and comfortable spaces to encourage student and teacher literacy. The library offers not only textbooks but also storybooks and biographies. The school continuously innovates and enhances the quality of education. In 2022, one of its programs was the development of a digital library as an effective platform for teachers and students to access information. This was done to provide broader and unrestricted access to knowledge and learning materials. The digital library program involved the creation of digitally designed reading materials using specific applications. Additionally, the school provides digital reading materials and resources through its library.



Figure 1. Al-Bayan Islamic School Jakarta Library

The library is attractively designed with pictures and motivational words, and the comfortable space inspires the literacy spirit of students and teachers. The library provides books that are not only educational but also illustrated and interesting to read. It offers not only textbooks but also books containing stories and biographies. The school continues to innovate and be creative in improving the quality of education. One of the programs in 2022 involved the development of a digital library as an effective platform for teachers and students to access information. This was done to enable students and teachers to receive broader and unrestricted materials and knowledge, regardless of time and place. The digital library program takes the form of providing reading materials designed using digital-based applications. Additionally, the school library provides digital reading materials and resources.

To implement reading literacy activities, the school organizes public speaking activities (Tausiah). Public speaking involves speaking and delivering messages in front of an audience. This speaking skill not only boosts confidence but also enhances interest in reading. This is because every student who has the opportunity to speak must search for good materials, study, read, and memorize them to be presented in front of fellow students and teachers. Here are the results of an interview with the Islamic Education teacher regarding the implementation of public speaking (Tausiah):

"One of the objectives of Tausiah is to enhance students' abilities and self-confidence. The topics can be accessed from textbooks or by searching for information through the internet. This activity is demonstrated by the Islamic Education teacher, and then students in grades 7-9 take turns conducting this activity once a week according to a schedule.

The public speaking or Tausiah activity has a positive impact on both students' reading interest and self-confidence. Students are accustomed to speaking in forums not only at school but also in various activities at home and in the community. The ability to express opinions and think critically is also cultivated in students. Knowledge, especially about religion, can be mastered by delivering material in the Public Speaking activity.

3.4 Digital-Based Teacher Professional Development

Digital-based learning has become more relevant during the COVID-19 pandemic. All aspects of life have been affected by this virus, including education. The previous face-to-face learning approach has shifted to online learning due to the pandemic. Initially, digital-based learning activities involved using photos, videos, and face-to-face interactions. However, since the pandemic, distance learning has been conducted through online platforms. This situation has urged teachers to implement digital-based learning. Remote learning activities require teachers to use digital media such as laptops or smartphones as teaching tools. Teachers are expected to create digital teaching materials for their lessons.

The implementation of digital-based learning was initiated by SMP Islamic School al-Bayan in 2019. The first stage of the project entailed distributing computers and laptops to all educators in order to facilitate the educational process. Subsequently, the subsequent stage entailed the integration of educational applications into the pedagogical framework. One of the utilised programmes is referred to as Hasan Educational Technology. This application facilitates the educational process and aids in the management of school administration. The system serves various purposes, including tracking attendance, managing student and teacher data, facilitating the learning process, conducting midsemester assessments (PTS), and administering final semester assessments (PAS). In addition to providing support to educators and learners, this programme also offers advantages to parents by enabling them to oversee their children's attendance, academic performance, and educational engagements. The data presented above was acquired through an interview conducted with the Headmaster of SMP Islamic School al-Bayan, ABT.

Initially, digital-based learning faced challenges because teachers had limited digital skills. The school's administration made efforts to strengthen and provide guidance by conducting training workshops related to digital learning. Another effort was to facilitate each teacher in creating teaching materials using videos through social media. Students could access the learning materials through the teachers' video uploads and review them repeatedly. To enhance their skills, teachers were given opportunities to learn together and share information related to creating teaching materials, such as creating images, instructional videos, and PowerPoint designs. Teachers were required to create teaching materials that incorporated digital elements. To facilitate access to information, the school provided digital libraries for teachers and students. This facility allowed them to access various resources, including books, magazines, news, and more. The presence of the digital library also fostered teachers' creativity and innovation. Through social media and the digital library, teachers could access global resources, which led to innovative teaching practices.

One of the innovative learning activities was virtual field trips. In the past, field trips were conducted by physically visiting various places. However, through digital learning, visits could be done virtually. Although students were not physically present at the destinations, these activities helped students enhance their understanding of the learning material. SMP Islamic School al-Bayan organized a virtual field trip to Turkey, which is currently a popular destination. During the virtual field trip, students stayed at home while the school collaborated with bloggers or virtual guides in Turkey to explain the historical sites. The following is an excerpt from an interview regarding the virtual field trip program with the Headmaster of SMP Islamic School al-Bayan, Mr. ABT:

"For the field trip activity, it was conducted virtually in Turkey and Madinah. Besides videos, we also had bloggers or real-time guides. Guides were prepared to accompany and explain to students about the historical sites in Turkey."





Figure 2. Virtual Field Trip Activity for Students of al-Bayan Islamic School Middle School

Furthermore, virtual Islamic Religious Education activities pertaining to Hajj and Umrah were also carried out. The guides hailing from Makkah and Madinah provided comprehensive explanations regarding the many places of worship and the rites that are undertaken throughout the sacred pilgrimages of Hajj and Umrah. The Ka'bah, Safa and Marwah, the sa'i rite, the stoning of the Jamarat, overnight stay in Muzdalifah, spending the night in Mina, and performing the wuquf in Arafah were all elements that were incorporated into the pilgrimage experience. The aforementioned rituals were conducted using a virtual medium, wherein bloggers disseminated comprehensive information regarding the locations and the procedures associated with Hajj and Umrah. This activity facilitated the acquisition of information among students, enabling them to observe firsthand the historical value of four specific locations via Internet networks. It served as a source of joy and enjoyment for pupils during the COVID-19 pandemic.

4. CONCLUSION

This study demonstrates that the digitization of education has a positive impact on learning patterns, especially in schools located in urban areas. The available access and facilities can be utilized to their fullest potential. The impact of educational digitization on learning is the emergence of creativity and innovation among teachers in their instructional practices. Various digital media creations are employed to enhance the variability in the learning process. Additionally, digital literacy has transformed the perspectives of students and teachers in urban communities when it comes to accessing information. Information can be obtained from digital libraries that are accessible without limitations of time and space. SMP 31 Al-Azhar and SMP Islamic School have utilized these conveniences in their teaching practices. The first step taken is facilitating the implementation of learning applications in schools by providing administrative services for students and teachers. Furthermore, professional development for teachers is achieved through training activities based on digital learning. To support teaching activities, schools provide teachers with adequate digital equipment. These activities foster enthusiasm and innovation in teaching. One notable innovation is the implementation of virtual field trips. Traditionally, field trips were conducted in person, but with educational digitization, students can now experience them virtually. This approach is highly efficient, saving time, cost, and effort, especially considering the current global context of the COVID-19

pandemic, including its impact on Indonesia. These innovations and creativity reflect the conscious efforts made by teachers to create a high-quality and enjoyable learning environment.

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