

# IMPLEMENTATION OF IT-BASED LEARNING (E-LEARNING) IN GROWING DIGITAL LITERATURE IN SMA BATIK 1 SURAKARTA

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## Abstract

The purpose of this study is to determine the application of e-learning as a means of increasing digital literacy at SMA Batik 1 Surakarta, as well as the value of e-learning and the barriers to its implementation. Interviews, interactive observation, and documentation were used to collect data in this qualitative descriptive research with a case study approach. Data analysis with a succession of operations employing flow or interactive approaches; data reduction, data display, conclusion drawing/verification. Source and technique triangulation strategies are used in triangulation. Conclusions of the research: 1) E-learning to replace offline learning that cannot be implemented due to the covid-19 pandemic at SMA Batik 1 Surakarta using teams office 365, LMS-based e-learning, and utilizing whatsapp and e-library as support; 2) E-learning to replace offline learning that cannot be implemented due to the covid-19 pandemic, thereby eliminating the fear of lost learning which will have an impact on lost generation; and 3) Availability of sufficient internet quota, weak network and learning motivation are obstacles to the implementation of e-learning at SMA Batik 1 Surakarta.

**Keywords:** e-learning, digital literacy

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## 1. Introduction

Number 03/KB/2021, Number 384 of 2021, Number HK.01.08/MENKES/4242/2021 NUMBER 440-717 of 2021, Joint Decree of the Ministers of Education and Culture, Religion, Health, and Home Affairs Concerning Guidelines for Implementation of Future Learning Face-to-face learning is prohibited because to the Coronavirus Disease 2019 (COVID-19) pandemic, which necessitates learning to be conducted online via internet resources. For both teachers and students, online learning is a novel concept that necessitates instant adaption in order for learning to proceed as planned. A precondition for successful online learning is the development of digital literacy skills through the use of advanced information and communication technology.

To promote improving educational quality, the use of information and communication technologies in learning activities must be optimized. The usage of the internet network for purposes other than schooling is quite frequent. Internet users in Indonesia reached 212.35 million users in 2021, according to Internet world stats, with internet penetration rates reaching 76.8% of the total population as of the end of March 2021. (Kusnandar, 2021). According to a poll conducted by the Indonesian Internet Service Providers Association (APJII), 51.5 percent of users utilize social media and 32.9 percent communicate via the internet (Milana, 2021). This indicates that Indonesians have a moderate level of digital literacy, with a score of 3.00. (Setu, 2020).

The Ministry of Education and Culture, in collaboration with the Ministry of Communication and Information, has launched a policy that includes the National Digital Literacy Movement, a National Assessment focusing on literacy, numeracy, and the character of Indonesian students, the ICT-Based Learning program (PemBaTIK), the publication of digital literacy modules, and the Digital Literacy Roadmap ( Ministry of Education and Culture, 2021). Because digital literacy is thought to make working and accessing information via computers easier. Digital literacy has had an indirect impact on an individual's skill and experience with these new media, as it is based on their command of ideas and creativity (Knobel & Lankshear, 2006). In the subject of education, digital literacy allows pupils to access information more easily and quickly.

Various internet-based innovative platforms can be used to enhance capacity in the field of digital literacy. In a study, Pratama et al. (2019) found that school-based e-learning can increase students' digital literacy skills, but not to their full potential. Another study by Anggrasari (2020) on the use of e-learning to improve students' digital literacy abilities shows that, in addition to boosting digital literacy skills, online learning improves learning outcomes. The purpose of this study is to discover how e-learning is implemented at SMA Batik 1 Surakarta, as well as the challenges it faces in expanding digital literacy.

## **2. Method**

The adoption of e-learning to grow digital literacy at SMA Batik 1 Surakarta is the subject of this qualitative descriptive research with a case study design. The subjects, on the other hand, are persons who are directly tied to the research topic. Data was gathered from the principal of SMA Batik 1 Surakarta, the Deputy Head of the Curriculum and Public Relations Division, class XII instructors, and class XII students through interviews, participatory observation, and documentation. SMA Batik 1 Surakarta is located at Jalan Slamet Riyadi No. 445, Pajang, Laweyan, Surakarta, Central Java.

Data analysis using Miles and Huberman's flow analysis or interactive technique, which consists of three stages: data reduction, data display, and conclusion drafting. The veracity of the data will be checked using the source triangulation approach, which involves identifying or interviewing sources other than those who first gave the data (Hermawan & Amirullah, 2016).

## **3. Results and Discussion**

Like it or not, SMA Batik 1 Surakarta must implement information technology-based learning activities in response to the demands of the industrial era 4.0. The school already has an active website <https://smubatik1-slo.sch.id> that serves as a useful means of loading school profiles, student-teacher data, announcements, news, and so on. This school has strengthened the usage of the Merdeka Learning platform through the studi.id account, which is integrated with the Rumah Belajar portal, as the embodiment of an IT-based school with the deployment of e-learning.

Teachers provide instructional resources by activating an account on the [rumahbelajar.go.id](http://rumahbelajar.go.id) portal. The school recognizes that digitalization is becoming more prevalent in the sphere of education, and that it is vital to adapt as rapidly as possible to keep up with the rapid advancement of learning information and communication technology. The implementation of Teams Office 365 will promote improving digital literacy skills using the Learning Management System (LMS), allowing teachers and students to communicate knowledge and information more effectively and efficiently.

### **Implementation of E-learning, the Importance and Obstacles to Growing Digital Literacy at SMA Batik 1 Surakarta**

#### **3.1 Preparation of e-learning learning**

The initial activity was started by conducting e-learning socialization activities in which the use of Teams Office 365 or Microsoft 365 was introduced as a replacement for Office 2019. Teams Office 365 has advantages that can be used to support e-learning, namely as a chat-based classroom between teachers and students. , so it is very relevant to the application of the LMS platform used at SMA Batik 1 Surakarta. Students are introduced to how to open, log into the LMS, how to access materials, how to send assignment results, how to take advantage of the chat feature, how to close and even how to update the application.

The agreement to utilize an integrated system, which means that all uniforms are used in conjunction with the e-learning program Teams Office 365, which is used by teachers and students in Class XII. Teachers' demands are also met at SMA Batik 1 Surakarta by the organization of a proctor, who is an officer who controls the server and handles technological applications in this e-learning, so that teachers do not have technical difficulties when using it.

#### **3.2 Implementation of e-learning**

Online learning at SMA Batik 1 Surakarta uses LMS-based e-learning and uses WhatsApp as a support. In its application, e-learning applies web-based learning, computer-based learning, virtual classes and or digital classrooms (Meliyani et al., 2019). The shortcomings that occur in online learning can be overcome with e-

learning, because e-learning is significantly able to overcome learning limitations and expand the scope of learning resources (Mustofa & Riyanti, 2019). The subject matter in the LMS is in the form of multimedia-based content, namely material in interactive multimedia formats such as learning videos and text-based content, namely material in text formats such as pdf, word or PowerPoint. According to Hermawan (2021) LMS is the right choice in responding to the online learning process during the Covid-19 pandemic.

During the online learning process, teachers and students use electronic devices such as computers, laptops and gadgets. This is in line with Ariani's (2021) statement that e-learning should use technology services such as computers, audio or video and telephone to be more effective.

The implementation of e-learning using digital media is carried out at SMA Batik 1 Surakarta starting from; introduction, delivery of material, questions and answers, discussions and assignments to students. Where in these activities lead to interactions between teachers and students even though online. According to Uno (2012) the implementation of learning through the process of interaction between students, teachers and learning resources results in exchanging information in a learning environment. Digital media has the advantage of being used during this pandemic. As stated by Ayu & Amelia, (2020), that digital media in online learning has advantages; 1) can be used to collect, store, and share information, 2) information and learning materials can be accessed at any time, 3) teaching materials can be studied independently, 4) there is interactivity between teachers and students and students with other students because of the support of communication features, 5) the existence of an output score and feedback after students conduct an assessment.

The use of Microsoft teams and WhatsApp by teachers at SMA Batik 1 Surakarta has proven to be able to encourage students to be more active, not only receiving material provided by the teacher but also looking for reference information via the internet. This is an advantage of e-learning, namely making students more proactive (Ahyar et al., 2021) and training students to be more independent in gaining knowledge (Supuwingsih, 2021).

Students have studied learning materials, technology, and digital media indirectly as a result of this information technology-based learning. This indirectly motivates teachers and students to develop their digital literacy skills. According to Jessica et al. (2020), digital literacy encompasses not only the ability to use technology gadgets, but also the ability to read and comprehend the information delivered. Computer literacy, technology literacy, media literacy, and information literacy are all included in the definition of literacy (Padmadewi & Artini, 2018).

SMA Batik 1 Surakarta organizes the procurement of a digital library, which seeks to make it easier for instructors, students, and other school members to obtain complete and correct material, in addition to e-learning as a digital literacy growing. This is in line with Simarmata et al., (2021), who claim that digital literacy can help students learn faster and more efficiently, improve skills, save time and money, and be more ecologically friendly.

### **3.3 The Importance of E-Learning**

The pandemic, together with the policy of Implementing Community Activity Restrictions (PPKM) and learning at home, has sparked public concern about the phenomenon of a lost generation as a result of the lack of adequate education resources for children during the pandemic season. The impact of the loss of possibilities for kids to gain optimum learning is known as the phenomenon of lost generation (lost learning). In the Covid-19 circumstance, information technology (IT)-based learning policies are the best option to avoid lost learning. These concerns can only be alleviated through online learning based on e-learning. Learning continues despite the ban on meeting and participating in activities outside the home. The PPKM policy mandates that all activities, including school, work, and recreation, be carried out from the comfort of one's own home. For this reason, SMA Batik 1 Surakarta considers it important to organize online learning using e-learning facilities.

Teachers can use e-learning to give learning materials in video format, PDF format, quizzes, and games via the internet, which can be accessible anywhere and at any time. Students do not always need to learn in class to obtain information. Students can also improve their learning by exploring for references and information from other sources (Meliyani et al., 2019).

Digital literacy abilities are extremely important in e-learning. Digital literacy refers to a person's capacity to use communication and information technologies from digital devices connected to the internet, as well as their ability to be critical, creative, and innovative in a digital context. According to Steve Wheeler (in Simarmata et al., 2021), there are crucial factors in establishing digital literacy: 1) social networking, or the

capacity to use social media effectively. 2) content filtering and selection, the capacity to locate and pick any information based on requirements; and 3) content creation, the ability to produce material.

### 3.4 E-learning Implementation Constraints

Every learning experience must have its unique set of challenges, as those encountered by SMA Batik 1 Surakarta when introducing e-learning. Internet network limits, quotas, and students' incentive to study are all examples of these constraints. This must be properly addressed. According to Ariani (2021), e-learning is at risk of failing due to limited internet access and low motivation among students.

As a result, SMK Batik 1 Surakarta has implemented the following policies: a) provide tuition fee discounts to students; b) allow teachers to upload materials and assign assignments to students using the WhatsApp application; c) students can come to school using learning facilities from other schools while still adhering to the health protocols imposed during the Covid-19 pandemic. d) give pupils with learning motivation so that they can resume active participation in learning and literacy.

## 4. Conclusion

Implementation of e-learning in growing digital literacy at SMA Batik 1 Surakarta using teams office 365, LMS-based e-learning and utilizing WhatsApp and e-library as support. E-learning to replace offline learning that cannot be implemented due to the covid-19 pandemic, thereby eliminating the fear of lost learning which will have an impact on lost generation. Availability of sufficient internet quota, weak network and motivation to learn are obstacles to the implementation of e-learning at SMA Batik 1 Surakarta.

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