

## Blogging to Write: Promoting Learner Independence in a 4.0 Learning Environment during the pandemic Covid-19

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### ABSTRACT

*The goal of this action research project is to investigate how a blog writing project may help university students become autonomous language learners especially in the 4.0 learning environment. This research also aims to determine the value of using a blog to help students improve their writing skills. Questionnaires and interviews were used to collect data at the end of the term. At this point, students were invited to consider their feeling and perceptions regarding the blog, as well as how it helped them practice writing outside of class, especially in the situation of pandemic Covid-19 nowadays. The study found that students' reported benefits of utilizing blogs included increased interest and motivation to use English as a result of interaction with, and feedback from, classmates and teachers. This can tell that they have already become autonomous learners. The preliminary findings also suggest that learners who participated in the blog project were interested in continuing to blog even after the semester finished. Further research needs to focus on whether or not learners did continue using this resource after the course ended.*

### ARTICLE HISTORY

Published September 30<sup>th</sup> 2022



### KEYWORDS

Blogging; Covid 19 pandemic; Promoting Learner Independence; 4.0 Learning Environment

### ARTICLE LICENCE

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### 1. Introduction

The technology is currently the most rapidly developing area of information and communication technology (ICT), with a wide range of technologies and sophistication (Junaidi, et al., 2020a). The Internet is one example of rapid technological advancements in the information and telecommunications fields. It has a huge impact on the worldwide community's life patterns in general, particularly in industrialized countries. It is also known as the Internet world without borders because it is genuinely global. The ability to obtain or provide information is no longer limited by time or location. Although still lagging behind, Asian countries are more advanced, and Indonesia's Internet growth has progressed significantly. Learning was first used in the field of education. In fact, some people do not take advantage of the Internet's capabilities. Due to linguistic limitations, some people have difficulty locating information, despite the fact that the Internet is used for a wide range of hobbies and educational purposes (Nahdhiyah, et al., 2022). As a result of living in such a smart period, all that is required of each individual is the ability to use the Internet. The internet as a learning medium began to be used in the field of education.

In the last three decades, the field of information and communication technology has experienced remarkable expansion and development (ICT). The rise in popularity of social media and Web 2.0 technologies, particularly in the last decade, has had a significant impact on how people communicate around the world (Thomas and Thomas, 2012). Social media platforms such as Facebook, Twitter, LinkedIn, Google+, and Renren have the potential to become key disruptive technology for developing cutting-edge management education models (Christensen 1997; Dewah & Mutula, 2013). However, according to Fleck (2007), ICT applications have primarily served as support mechanisms rather than disruptive technology in the development of e-learning. These all evidence bring a great impact on the way people learn especially in this pandemic situation. Several investigations have discovered that the Covid-19 epidemic has had a significant impact on the education sector (Rahardjo & Pertiwi, 2020). At the same time, the 4.0 industry has been implemented for quite some time. The 4.0 industrial revolution makes a significant contribution to society and has a significant impact. Naturally, this has a major impact on education, particularly in Indonesia. This effect causes changes in interactions that were previously face-to-face in class, resulting in an internet metabolism (online). In the education sector, the government has implemented a learning policy, namely learning from home (WFH), through the Ministry of Education and Culture in all countries. Even if teachers and students do not meet directly at school, the learning from

learning policy permits the teaching policy and learning process to continue. Teachers and students can still offer instructional materials and receive lessons without having to meet face-to-face. A distance learning system is used to allow students to learn from home. According to Chun, Kern, and Smith (2016), distance learning is an educational system in which students are separated from their teachers and the learning process uses various resources through Information and Communication Technology (ICT).

### **1.1 The industry 4.0 and preparing students to be autonomous**

The notion of education changes fundamentally with Education 4.0; the new education system, which is based on life achievement rather than tests, emphasizes the importance of individualized education, technology confidence, and individuals who are constantly learning and self-improving. The trends of education 4.0 shift the learning major responsibilities from teachers to learners. According to Prasetyo and Trisyanti (2018) the fourth industrial revolution makes a significant contribution to society and has a significant impact. Naturally, this has a major impact on education, particularly in Indonesia. This effect causes changes in interactions that were previously face-to-face in class, resulting in an internet metabolism (online). Learning evaluation, in the form of facilities that can assist learning activities in the classroom that are connected to the internet network as a collaborator to combine face-to-face activities with the online network, is no exception (Said, et al., 2021). This condition goes in line with the situation of the pandemic Covid-19 that has been going over the last two years period of time. Students with no exception have to work from home to attend lectures. Both Prasetyo and Trisyanti continue to pin point that the era of the Industrial Revolution 4.0 is now a widely discussed issue, including in Indonesia. It has started since the 18th century and was marked by the discovery of a steam engine that allowed the production process to be carried out in bulk. The Industrial Revolution 1.0 was the name given to the Revolutionary Era at the time. With the arrival of electricity in the 19th and 20th centuries, the Industrial Revolution 2.0 began, with the invention helping to cut production costs. With the power of computerization, Industrial Revolution 3.0 began in the 1970s. Science and technology that is still evolving propels humanity forward. Globalization entered the period of the Industrial Revolution 4.0 in 2010, thanks to intelligent engineering and the internet of things, making it easier for individuals to undertake activities in a more effective and efficient manner. (1) (Tangahu, et al., 2019) in addition to that, according to McKinsey digital research, the 4.0 industrial revolution has the potential to automate at least a third of all students. This change will have an impact on students' soft skills in the future. The World Economic Forum published a paper in 2016 that looked into these trends. Complex problem solving, social skills, and process skills are among the soft skills they claim will become necessary in the near future. Education 4.0 is all about changing with the changes, and for higher education institutions, that means figuring out what their future graduates will need. The following are some of the novelties that Education 4.0 has to offer:

#### **a. Education that is not bound by time or location**

Students have the freedom to learn anywhere they want, whenever they want. Education is now space and time independent, thanks to innovative interactive learning tools. Individuals who learn the theoretical part of their education individually and in a digital environment can use practical project-based activities in the classroom to turn their knowledge into real-life experiences.

#### **b. Individualized instruction**

Students will receive personalized instruction via special tools that are tailored to their ability. A student who has trouble grasping what many children can readily absorb will be able to progress at their own pace in this manner. For each student in traditional education systems, the same model is used. However, education 4.0 believes that trying alternative pathways as long as they lead to the same goal is not a bad thing.

#### **c. Project-based education**

Instead of writing answers on paper, students have the opportunity to apply what they have learned on a real project to prepare them for the future freelancing work paradigm.

Children can strengthen the following abilities and develop themselves in these areas of considerable relevance throughout their academic career by using project-based learning: 1) Problem-solving, 2) Being a problem-solver, 3) Collaboration and teamwork are essential for success, 4) Organize your time.

#### **d. Curriculum with student involvement**

Students will be involved in the development of curricula in Education 4.0. Maintaining a relevant, up-to-date, and useful curriculum for professionals and students. Instead of a single exam, the evaluation will be based on the entire educational time. Mentoring will become more important for students who want to better their education in a healthy way. This research focused on the following principal issues; 1) how a blog writing project (through writing diary) may help university students become autonomous language learners in the 4.0 learning environment?, 2) Whether the blog platform can further improve the quality of students' writing and make them independent learners (particularly in the era of 4.0 with the spread of pandemic covid-19?

Based on the formulation above, the objectives to be achieved in this study are: 1) To find out of how a blog writing project may help university students become autonomous language learners in the 4.0 learning environment, 2) To determine the improvement of the students' quality in writing and bring them to be independent learners.

#### **1.2 Theoretical Framework**

In this era of globalization, there has been a paradigm shift in education. Today's education presents at least two significant issues. The first difficulty arises from a shift in the way people think about learning. Prioritizing stimuli and reaction in behaviourism is insufficient to get optimal results. Aside from educators, individuals interested in the cognitive and emotional elements of students, or more precisely, how and what happens when students learn dynamically, including internal and external factors that influence their way of thinking or learning, are increasingly interested. Under the present circumstances, teaching has led to a constructive view which states that any practice of learning an absolute must involve activities that support all students to improve and develop skilled analytical and critical reasoning, problem solving, communication skills, and achieve the habit of thinking. Learning in English literature must also present the key ideas and concepts from various perspectives, such as presenting a wide range of examples and applications to motivate and illustrate the material, promoting the connection of a field of science to other disciplines, to develop the ability of each student to apply the material taught to the other disciplines, introducing the latest topics from a field of science and its applications, and improve the perception of the students about the vital role and importance of science and technology in the development of today's world.

The second issue confronting education today is the rapid expansion of information and communication technology, which provides a variety of learning opportunities. These technology advancements allow for a shift in the orientation of self-guided learning from outside-guided learning. Apart from that, technology plays an essential role in rejuvenating the original notion of learning, which was primarily focused on learning as a presentation of varied knowledge into learning as a guide to discover the rich cultural and social knowledge. Constructivism's outlook on learning and transformations that occur as a result of advances in information and communication technology are two things that are very consistent and mutually reinforcing. Constructivism and technologies, individually or in combination, offer new possibilities in the learning process, both in the classroom and in the workplace. According to Rosenberg & Mummaneni (2001), there are five major shifts in the learning process as a result of the use of ICT: (1) from training to performance, (2) from the classroom to anytime and anywhere, (3) from paper to "on line," (4) from physical facilities to network facilities, and (5) from cycle time to real time. Communication is used as a medium of education through communication media such as telephones, computers, the internet, and e-mail. Lecturers can provide assistance without having to engage with students directly. Similarly, individuals can access information from a variety of sources via cyberspace or virtual space, which they can access via computers or the Internet. Lecturers' responsibility is to develop their own curriculum to help pupils succeed. The most recent development is "cyber teaching" or "virtual teaching," in which the instructional process is conducted via the Internet (Junaidi, 2020b). Another term that is becoming more prevalent nowadays is e-learning, which is a method of learning that involves the use of ICT media, particularly the Internet. E-learning, according to Rosenberg & Mummaneni (2001), is a vast network based on three criteria: (1) e-learning is a network that can renew, store, disseminate, and share teaching materials or information; (2) delivery to end users via a computer using conventional Internet technology; and (3) a focus on the most comprehensive picture of learning outside of the traditional learning paradigm. In addition to ICT's own knowledge of e-learning, the practice of learning facilitated by ICT is becoming more prevalent. Telephone, audio, video cassette, satellite communications, and computers are all examples of technology services.

Currently, e-learning has evolved into a number of ICT-based learning models, including CBT (Computer Based Training), CBI (Computer Based Instruction), Distance Learning, Distance Education, LCC (Learner-Centered Classroom), WBT (Web-Based Training), and so on (Kapoor, et al., 2019). Give a blog, which is a free and simple way to keep up with the newest advances in the world of the Internet, an opportunity to make the activities more appealing and interactive.

Sources of relevant material can be distributed to all portions of the internet and accessed by anybody via blogs. As a result, the difficulties that students have in gathering the sources of information needed for the learning process can be solved. As a result, the blog is one of the strategic learning media for enhancing the active learning process. According to Bruner (1966), (as described in Darsono), there are three degrees of learning mode: direct experience (enactive), pictorial image experience (iconic), and abstract image experience (symbolic). For example, the word "circle" is directly understood by making or drawing a circle at the second level, or sarcastic (picture/image), said circle is understood by gazing at pictures, paintings, photos, or movies. Students can learn the concept of a circle through drawings, paintings, photographs, or movies, even if they have never constructed one. Furthermore, the students read or hear the word "circle" and try to match it with an image of a circle or with their own experiences to form a circular shape on a symbolic level. All three have interacted in the past with the goal of gaining "experience" (knowledge, skills, or attitudes).

The more senses that are used to receive and process a material or information, the more likely it is that the information will be understood and remembered. Edgar Dale (in Lee and Reeves, 2017) divides learning experiences into categories ranging from the most tangible to the most abstract. Educators use this classification to determine which instruments are acceptable for a certain learning experience. The teacher should not have complete control over the media in a learning process (Sukmawaty, et al., 2022). That is, if the teacher throughout the learning process does not use any type of learning medium, the student will not be considered a failure, because the key procedure is how learners can learn effectively and attain previously set goals.

The usage of instructional media, on the other hand, will increase successful learning because of the following benefits; 1) to provide a deeper comprehension of the learning content addressed, as it can explain tough or hard concepts in a simpler or easier manner. 2) to translate learning materials or abstract objects (which aren't real and can't be viewed directly) into concrete terms (or real, can be seen, felt, or touched), 3) to assist teachers in presenting learning materials to students in a way that they can grasp, recall, and revisit the subject being taught more readily; 4) to pique learners' interest, motivation, activity, and creativity. 5) to encourage learners to participate in the learning process and leave a lasting impression on them, 6) to establish a shared understanding and correct opinion about an object, because it is delivered not only verbally, but also through the use of real instructional media, and 7) to create a conducive learning environment, where students can communicate and interact with the environment in which they are learning and provide real and immediate experience.

There are still several other things teachers can do to help students learn. The lecturer's job is to make sure that every student has the opportunity to interact actively with the many learning resources accessible. Students can learn from other lecturers as well. There are other learning resources available in addition to teachers. On this premise, AECT (Association of Education Communication Technology) grouped learning resources into six categories in his work *The Definition of Educational Technology* (Januszewski & Persichitte, 2008);

a. Message, which conveys information in the form of concepts, facts, meanings, and data via the lessons of other components. All subjects/courses or teaching materials taught to pupils are included in the message components.

b. People, i.e. human beings who act as message storage, processing, and dissemination agents, such as professors, lecturers, and students.

c. Material, which is software that contains the message to be delivered using tools or hardware, or on its own, such as movies, audio, periodicals, and so on.

d. A device is something (hardware) that is utilized to transmit messages recorded in materials such as OHPs, slides, radios, and so on.

e. Technique, a technique or reference developed for the delivery of a message using materials, equipment, people, and the environment, such as simulations, demonstrations, question and answer, and so on.

f. Setting (or environment), which refers to the scenario or atmosphere in which the message is conveyed, including both physical and nonphysical venues like classrooms and libraries.

## **2. Method**

To achieve the objectives of this study, the merger between quantitative and qualitative approaches will do. The percentages of both are 20% quantitative and 80% qualitative. Descriptive qualitative methods will be used to present the results of data analysis. To be more structured, the research methods used in this study will be described as follows;

- Area of Research: Which became the location of the data is the English Department of the Faculty of Cultural and Science, UNHAS
- Research Subjects: 30 students from the fifth semester which will be the subject of this study. They will be selected at random to determine the validity of the data. They will be interviewed to make qualitative data. Surveys in the form of questionnaire will be performed at all samples to collect data on attitudes and their perceptions of the use of Blog. The question posed in this survey is the elaboration of a Problem Formulation (Research questions) will be answered through this research.

Data for this study will be collected for approximately three months in the Department. Multiple data sources to be used in the study were questionnaire, interview, classroom observations, field notes, as well as artifacts (documents). Merging of multiple data sources will enable the achievement of data enrichment. The adoption of a wide range of sources and types of data triangulation enabled data to be achieved. Here will be briefly described the types of the data collection.

### **a) Questionnaire:**

To obtain accurate data on study subjects, questionnaires are designed with a load of questions about the information that is directly related to the formulation of the question in the formulation of the problem. The second instrument will be used in this research is interview. Two (2) sets of questions prepared aims to collect data on the attitudes and perceptions of students (set -1 interview) and follow-up questions from questionnaires and observation classes where the students' learning strategies can be directly monitored (set of interview-2) and connect it with field observations where students spend time outside of class hours.

### **b) Classroom Observation Matrix:**

The next data collection method is a matrix that is designed to record the results of classroom observation tailored to the issues that will be studied. Through this method, some information can be obtained, especially to see the participation of students in a class that will directly represent models of learning strategies they use and their response to the exposure of the material from the lecturer.

### **c) Note Fields (Results of field observations)**

Notes on aspects that support the research object will be updated while the research is in the field. This will aid researchers in gathering information on students' learning practices outside of the classroom. They were gathered for the study, but more crucially, they are seen as social facts that are created, shared, and used in the larger society." Data except for the questionnaire, all data acquired through the study instrument will be assembled, transcribed, interpreted, and analyses descriptively qualitatively.

The frequency of use of the questionnaire will be computed and examined quantitatively using SPSS software tools. The qualitative analysis will mostly be used to review the information gathered. Data collection and analysis will be done on an ongoing basis, with procedures devised before to analyse the data that has been collected. The analysis in question examines the early phases of data interpretation and categorization. This allows researchers to identify the study's scope as soon as possible. NVivo software (Morgan et al., 2002) will be used for qualitative analysis in this study. NVivo is a technical innovation that serves as software for data storage and retrieval (deposit and withdrawal data) designed for qualitative data. Once the data has been transcribed, researchers will evaluate it with NVivo and include it into the overall discussion of the findings (finding) to answer the problem formulation (research questions).

Artifacts or documents are a key instrument in the study and are very dependable in this study. This is possible because the document is composed of written data that may be generated and used by the general public.

Documentation of local culture in the form of objects, text, and other materials is required for this study. In addition, the results of the investigated sample's pre- and post-tests will be gathered in order to track their growth over time in their particular faculties.

### 3. Result and Discussion

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### 4. Conclusion

Regarding the students' perceptions towards blog in improving their writing through diary/journal, specifically in the era of 4.0, data shows some significant results. One of those is that the majority of students agree that having to write diary everyday helps them to improve their writing particularly, and generally they become an autonomous learner unconsciously. Other than that, they confirmed that learning online can let them access more updated English materials. In other words, there were merely very little number of people who tended to reject the use of the internet due to some reason. The students' expectations towards the ICT use in English learning are quite interesting. There are 23 students out of 30 agreed to hope that the use of ICT will help them to learn English more efficiently. Furthermore, they feel very confident writing independently. They further expect that the use of ICT can be used to provide more interactive activities for students and to learn more about foreign culture via the Internet. To be more precise, the findings suggest that students perceived benefits of using blogs especially in the pandemic situation and also included increased interest and motivation to use English because of interaction with, and feedback from, classmates and teacher. The findings also recommend that students were interested in continuing to blog even after the semester finished. Further research needs to focus on whether or not students did indeed continue using this resource after the course ended. They also agree that the Internet can let them get more direct information from English speaking countries. Most importantly, they really enjoy the writing through weblog.

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