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E-learning on History learning: Aspect of material, teacher, learning environment, and student

Jamiludin Jamiludin, Darnawati Darnawati
History Education Department, Faculty of Teacher and Training Education, Halu Oleo University, Kendari, Indonesia

Article Info	ABSTRACT
	This research was conducted to determine the student's perception of e-learning in studying History in terms of material, teachers, learning environment, the students themselves, and the teacher's perception of e-learning in teaching History. The researchers employed a mixed-method design. Instruments of this research were questionnaire and interview guide. The questionnaire was used to collect quantitative data while interview guide for qualitative data. The questionnaire consists four aspects: material, teacher, learning environments, and students' view. The subjects were 25 history teachers and 161 students of senior high school in Kendari City, Indonesia. The result found that students prefer to study face-to-face. They prefer that the material is taught directly by the teacher in class. Class conditions are comfortable and they can interact with teachers and friends. Students do not feel bored doing assignments from teachers during a pandemic. They like to summarize history assignments rather than memorizing the material. Most students complain about the conditions of studying from home. Network problems and not having facilities, such as laptops and smartphones are the main problems for online learning. History teachers assume that in implementing e-learning, they prefer asynchronous e-learning. History teachers mostly use e-learning applications, such as Google Classroom, WhatsApp, and YouTube. This study was expected to shed new light on the intriguing concept of students and teacher's perception of e-learning on history learning.

Corresponding Author:

Jamiludin Jamiludin
History Education Department, Faculty of Teacher and Training Education, Halu Oleo University
Kambu, Kendari, Southeast Sulawesi 93232, Indonesia
Email: jamiluddin@uho.ac.id

1. INTRODUCTION

Delivering the mandate of the proclamation of Indonesia's independence on August 17, 1966, in Jakarta, the speech of the first president of Indonesia, clearly conveyed our nation's fathers' views regarding the importance of understanding history. He always reminded never to leave history [1]. The introduction of the history of the Indonesian nation's struggle must become a foundation in determining Indonesia's future direction.

History education is always linked to understanding the nation's journey and the powerful media to build nationalism. The student learning process of history education should give students the chance to perform their thinking skills and internalization process. History education must reflect a better future so as not to make students hate past events. Besides, history education should also provide a lesson in the nation's success and failure as a step towards building the future [2]. History has become one of the compulsory subjects given to senior high school students at every stage of Indonesia's curriculum [3]. The significance of studying history is:

i) Knowing their past and present and predicting the future; ii) Understanding and appreciating the culture of their culture and the culture of other peoples; iii) Fostering a sense of nationalism and patriotism among students; iv) Understanding man's origin and growth; and v) To develop analytical student skills [4].

In globalization, history education in academic units has an important role that cannot be ruled out. The rapid development of technology encourages a massive globalization process in every line of life of Indonesian society. The rise of foreign cultures due to globalization has undeniably caused a shift in values or the emergence of new values that impact the Indonesian people's way of life. This condition certainly requires a strong anticipatory action to prevent values that are incompatible with the values of Pancasila (Indonesian country foundation) adopted by the Indonesian people. History education today is needed to instill a strong historical awareness in the younger generation. It is encouraging the growth of identity as a complete national unity and forming a strong national character, so that the effects of globalization will not be a threat to the Indonesian people's lives.

The education pathway effectively fosters the young generation's spirit to achieve the nation's goals. What can be specifically considered to make this happen is through history education as a concrete means to understand history's importance. With efforts to improve the competence of history teachers and increase willingness, history learning will be better. Continuous educational innovation is needed in educational programs, including History learning programs in the face of globalization. History education must still exist and run so that students even recognize its history. With computers and the internet, history learning can be multimedia learning, mobile learning and historical movies [5]. Hence, history learning is more interesting, effective and efficient so that students understand more easily. Consequently, what students should do is to study history. However, it will be a problem if they express opinions without the support of correct evidence. Hence, provide evidences and improve moral and ethical system are essential to study history [6].

The development of communication technology allows the flow of information and culture to penetrate geographic boundaries rapidly; developments in science, technology, economics, and the latest events in other parts of the world are now accessible to us via computer screens and smartphones in our hands. This condition is not only due to the development of the global internet network. It is also possible because of the development of applications that aim to facilitate daily life activities. In the world of education today, we can get to know e-learning applications.

The existence of several educational applications opens up new opportunities that may have been of less concern to us, namely the e-learning method. E-learning is a cost-effective learning tool that uses electronic media, most commonly the internet [7]. This style of teaching and learning is often referred to by a variety of other names. Online learning, virtual learning, distributed learning, network-based learning, and web-based learning are some of them [8]. E-learning is used to increase the effectiveness and flexibility of learning [9]. E-learning with application and web-based began to be widely used and known in Indonesia after the Corona Viruses Disease 2019 (COVID-19) pandemic with the emergence of some e-learning applications.

Two basic e-learning types, asynchronous and synchronous, are frequently contrasted. Real-time refers to synchronous delivery. Both learners receive data simultaneously and interact with other learners directly. Teleconferencing (audio, video, or both), internet chat forums, and instant messaging are the examples. The transmission and reception of information do not happen at the same time in asynchronous delivery. The learners have to face their self-instruction and learning. The teacher and learners connect e-mail or feedback technologies, but not in real-time [10].

In the 5.0 age, teachers need to master technical and pedagogical knowledge of the internet dan technology used in their class [11], [12]. By using online learning, conventional face-to-face meetings need to be combined with the e-learning system. Both conventional and online class have important roles in learning [13]. Teachers who can see the situations and conditions of the class required at the time of teaching. E-learning application does not replace face to face meetings. Still, it becomes a tool that teachers utilize for getting rapid respond and students tracking [14], [15], especially in tackling COVID-19, the online learning framework for the accommodation of the teaching yet learning from home, since these pandemic powers are training from the initial home system [16]. During this pandemic, e-learning application plays a crucial role in supporting teachers, schools, and colleges to promote student learning during university and school closing cycles [17].

Based on the primary observation at senior high school in Kendari city, Indonesia, e-learning applications used in teaching history are WhatsApp, Google Classroom, and YouTube. WhatsApp is a free messenger to send multimedia messages, including simple text, videos, photos, and audio [18], [19]. WhatsApp instant messaging enables online communication and collaboration in a blended mobile lecture between online students linked from school or home. WhatsApp provides students with the ability to create a class publication and thus publish their work within the group [20].

Google Classroom is easy to use. It does not take too much room to keep the teacher and student on board with smartphones and a handy application. Teachers can share study materials, announcements, quizzes or questions, tasks, and evaluations, as well as feedback online with Google Classroom. Google Classroom allows teachers to present content and online learning materials to students more effectively, monitor online

learning tasks more organized, and foster indirect student communication [21]. It can also construct questions, create tasks, announce and give students grades and send messages. Moreover, they can save every file on Google Drive [22].

In education, YouTube is used as an e-learning platform for teachers and students to upload and share videos that show their understanding of a subject. The website of YouTube now belongs to Google and millions of people worldwide view it daily. Although much of the content on YouTube is intended for entertainment, much educational content exists, for instance, YouTube Edu [23]. Besides, YouTube is incorporated in classrooms. It improves students' understanding of learning efficiency and enhances engagement, gender has no impact on the perceived importance of YouTube in the teaching and learning process, and course delivery method affects student opinion [24]. Based on the descriptions of the three e-learning applications, teachers and students are expected to apply them effectively in online classes.

Some study focused on the history of e-learning and the use of e-learning in some subjects. Current research is different from previous research. This research focuses on students and teachers' perceptions of e-learning in history learning in terms of material, teachers, learning environment, and the students themselves. This research would later be useful for teachers as a consideration for using e-learning in history learning. Besides, it also helps teachers to determine the material, and a good learning environment for students. In addition, this research is also useful other researchers as material for preparing other methods or strategies for online learning in history subjects. This is very interesting where there must be a difference between study in class and e-learning. This study's objectives were: i) To investigate the student's perception of e-learning in studying history; and ii) To investigate the teacher's perception of e-learning in teaching history.

2. RESEARCH METHOD

This research employed a mixed-method design. It combined a quantitative and qualitative approach to collect and analyze the data [25]. This research contained quantitative data first and followed by qualitative data. This research was conducted in Kendari City, Southeast Sulawesi, Indonesia. The subjects of this study were 161 students and 25 History teachers of state senior high school.

2.1. Instruments

Research instruments were questionnaire and interview guide. The questionnaire administered to collect the quantitative data. The interview guide administered to the qualitative data. The interview guide consists of six questions for the teachers and five questions for the students. The questionnaire contains 21 statements. It is a 4-point Likert scale survey questionnaire consisting of four parts: material, teacher, learning environment, and students' view. In measuring the data, the students were asked to indicate their agreement or disagreement with each statement on a 4-point Likert scale that ranged from strongly disagree (score 1) to strongly agree (score 4).

2.2. Validity and reliability

The research obtained the results of the validity and reliability test of the questionnaire. The result of the validity of the test is presented in Table 1. The table shows that the value of r count>r table (0.1547) was based on a significant test of 0.05. It showed the items were valid. Besides, the result of the reliability test can be seen in Table 2. The result showed that the overall Cronbach alpha coefficient of the questionnaire is (r=0.798), indicating a high degree of internal consistency. Thus, it is considered a reliable instrument.

Table 1. The result of the validity test

					Pearson correlation					
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
.438	.539	.482	.542	.625	.521	.456	.483	.391	.553	.608
					Pearson correlation					
Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	
.488	.279	.187	.330	.351	.404	.637	.478	.381	.255	

Table 2. The result of the reliability test

Cronbach's alpha	N of items
.798	21

2.3. Data analysis

To examine the questionnaire's validity, the Product moment test, while reliability, was tested using Cronbach's alpha test. After knowing the validity and reliability test, the researchers gave the questionnaire to the teachers and students. The researchers used descriptive statistics for computing the questionnaire analysis using statistical package for the social sciences (SPSS) 25 program.

2.4. Procedures of data analysis

The procedures of data collection in this research were: i) Preparing research instruments, namely questionnaires and guideline interviews for the teachers and students; ii) The researchers did the validity and reliability test of the questionnaire; iii) Asking the students to accomplish the questionnaires for a week by using Google Form. They also have a personal interview by using WhatsApp. Besides, the teachers also have a personal interview; iv) The researchers analyzed data quantitative based on the questionnaires and data qualitative from the interview.

3. RESULTS AND DISCUSSION
3.1. Result
3.1.1. Aspect of material

The first aspect of questionnaire was about the students' perception of materials during online learning in History class. The result of material aspect was showed on the Table 3. The table shows that students do not feel lazy to make a summarize during online learning. Surprisingly, although there is a lot of material in historical subjects, it does not make students feel lazy to study. This result is in line with previous study [26] stated that in teaching History, the teacher could guide and assign their assignment that need to search the material by the internet, YouTube, or other educational web that related to their assignment. Therefore, the teacher's number of assignments does not make students feel bored while learning online.

Many theories or tragedies are various every year and do not make students feel tired to study. This result is contrary with previous study [27] that students claimed History subject as boring and uninteresting lesson. Therefore, they suggest to make History lesson to be more exciting and comprehensible. The students also have to remember these important things. They only feel tired when they have to memorize it. This result is in line with Tok [28] stated that the difficulty of governments school students in learning History were boring, and difficult to understand the lesson.

Table 3. Aspects of material

No	Statements	Responses (%)			
		Strongly agree	Agree	Disagree	Strongly disagree
1	Do you feel lazy when you are asked to summarize some materials during online learning in History subject?	5.0	25.5	55.9	13.7
2	Are there too many materials of History subject to make you lazy to study?	0.6	14.9	68.3	16.1
3	Do you feel stressed when the teacher is asked you to memorize a lot of historical material?	9.9	52.2	34.2	3.7
4	In your opinion, does too many assignments during online learning lead to boredom in History subjects?	10.6	39.1	42.2	8.1
5	In your opinion, do you think there are too many important theories and tragedies in the subject of History to make you tired of studying?	1.9	26.7	60.9	10.6

3.1.2. Aspect of teachers

The second aspect of questionnaire was about the students' perception about History teachers during online learning. The result of teachers' aspect was showed on the Table 4. The table displays students prefer teachers to teach with various methods when teaching History rather than using only one type of learning method. However, the students do not feel bored if the teacher's instruction and subject matter is exclusively provided through one type of e-learning application, such as WhatsApp. In addition, WhatsApp was widely used and was seen as a highly beneficial experience in terms of sharing information, connecting people, and forming learning communities [29]. Besides, the students do not like teachers to talk too much when studying online. It is in line with previous research [30] that teachers with great communication skills would help students learn and teach in a more positive environment. Students prefer doing assignments after online class to doing assignments when online class take place. Surprisingly, students do not feel bored if students do not meet the teacher virtually, do not listen to the teacher's voice, and do not have a sense of humor.

Table 4. Aspect of teacher

No	Statements	Responses (%)			
		Strongly agree	Agree	Disagree	Strongly disagree
1	Do you feel bored when teachers teach History with methods that do not vary?	9.3	47.2	36.6	6.8
2	Do you feel bored with teachers who teach History by using only one type of e-learning application?	6.2	33.5	52.2	8.1
3	In your opinion, does the teacher who lectures too much on the subject of History can cause learning boredom?	5.6	31.7	52.8	9.9
4	Are you getting boredom because the teacher doesn't have a fair attitude when teaching?	3.7	21.1	59.6	15.5
5	Are you feeling boredom because the teacher has no sense of humor?	5.6	34.8	51.6	8
6	Are you feeling boredom because the teacher gives too many assignments while studying online at the moment?	9.9	42.9	40.4	6.8
7	Are you experiencing boredom because the teacher did not meet virtual, send video recordings or voice while studying online?	3.7	25.5	58.4	12.4

3.1.3. Aspect of the learning environment

The third aspect of questionnaire was about the students' perception about learning environment during online learning. The result of learning environment aspect can be seen in Table 5. The table shows that students agree that the noisy environment, uncomfortable home environment, unsupported network, no data package, and dirty environment make students lazy and bored to learn. This result is in line with Prameswari and Budiyanto [31] stated that to create a learning environment, school administration provided learning tools, new learning strategies, and teaching and learning resources. Besides, students could not concentrate to study with the noise pollution [32]. Therefore, when taking classes online, it is recommended that each student have a private space at home to minimize exposure to high levels of disruptive noise [33].

Table 5. The aspect of the learning environment

No	Statements	Responses (%)			
		Strongly agree	Agree	Disagree	Strongly disagree
1	Can a noisy atmosphere around your study place lead to boredom?	30.4	39.8	26.7	3.1
2	Does studying from home with low network conditions/no data packet also cause your learning boredom?	52.2	42.2	5.0	0.6
3	Is it an uncomfortable home environment that can cause your learning boredom?	28.0	52.8	17.4	1.9
4	Does an unclean learning environment make you lazy to learn?	29.8	54.7	14.3	1.2

3.1.4. Aspect of student

The fourth aspect of questionnaire was about the students' perception during online learning. The result of students' aspect could be seen in Table 6. The table shows that when students feel tired, they don't focus on listening to the History teacher's presentation. However, most students do not feel tired when doing assignments from the teacher online. Besides, students feel the need to have History books [34], smartphone facilities, and laptops during the learning and teaching process online [35]. Moreover, most students faced network problems in online learning.

Table 6. Aspect of student

No	Statements	Responses (%)			
		Strongly agree	Agree	Disagree	Strongly disagree
1	When you are tired, cannot you focus on the teacher who is explaining History?	16.8	57.1	25.5	0.6
2	Do you feel tired when listening to teacher lectures and doing assignments?	9.9	36.6	46.6	6.8
3	Are you lazy to study when you do not have a History coursebook?	16.8	34.2	39.1	9.9
4	Are you lazy to study when you do not have smartphones, laptops, and internet?	28.0	39.8	26.1	6.2
5	Are you having network problems in online learning?	22.4	44.7	28.6	4.3

3.2. Discussion
3.2.1. Student's perception of History learning by using e-learning method: The aspect of the material, teachers, learning environment, and students

Based on the results, many interesting things need to be discussed further, such as the material aspect. Table 3 shows that students would prefer to summarize the material rather than memorize it when learning History. As for the interviews with students after obtaining these results, researchers interviewed students more deeply about this.

"I find it difficult to memorize the names of characters, times and places of important events. It is easier for me to understand if I summarize it first then I understand." (Student A)
"It was more difficult for me to memorize because after memorizing it, even after the test, I had forgotten the material that had being taught." (Student B)

The number of assignments given by the teacher does not make most students feel bored. This is because students, while studying at home, only play games and social media, so that during school hours, they are very enthusiastic about learning. This result is in consonance with previous research [36] argued that giving assignment to students made them tired. However, it will be different if the teachers give assignment and also give the long deadline to collect it. Meanwhile, in this research, students feel tired of memorizing the names of characters, places, events or dates in their past lives. Unlike the case with some students who feel bored with doing the History teacher's assignments, namely: i) Because they do not have internet quota and the network at home is less supportive; ii) Some students did not have facilities such as laptops or smartphones; iii) The material was poorly understood and students were lazy to read the textbook material. They prefer to be taught directly by the teacher; and iv) Few students did not submit assignments because the teacher gave monotonous material. Every time there was a learning schedule, the task was the same.

"It is difficult for me to be on time for class and do assignments given by the teacher. While studying from home, my sister and I took turns using my mother's smartphone." (Student C)

Based on some students' interview results, the researchers can conclude that most teachers have attempted to teach History to attract more students to learn during online learning. Several teachers have attempted to design History subjects using instructional media in audio, instructional videos, and power points which can make learning environment to be more effective and efficient. This is in line with previous findings [37] that observed the online learning in the time of COVID-19. The strength of online learning is the teachers still can use online tools to create their class effectively.

Besides, students criticized only a few teachers; teachers paid less attention to student assignments. They hope that the teacher gives a grade or appreciates their assignment and does not give them the same assignment every week. This result is in line with Tok [28] showed that students faced struggle in learning History regarding to less interaction and feedback from the History teacher.

Table 4 shows that most students think that they are bored if the teacher only uses one learning method when teaching. Most History teachers use the lecture method when teaching. Some students do not have much internet quota to join the virtual meeting. This is in line with the findings of previous researchers [38], [39] who found that one of the limitations of online learning is internet quotas. There is very little student attention during virtual meetings, and many students are not actively participating in class. It does not matter for students if the teacher only uses one leaning application. The application that is most widely used is WhatsApp. This is because students have often used it all the time to communicate. So, it is like a routine for them to use WhatsApp to study and social media.

"I am used to using the learning application used by the teacher, namely, WhatsApp. With this application, I can get material from the teacher, chat with friends, ask questions with the teacher and collect assignments." (Student G)

Additionally, most students did not feel that teachers who lack a sensation of humor bore them. According to them, History teachers are always severe and passionate when teaching. But what made them bored was when they had to do assignments during History class right away. Most students prefer to do assignments after online classes. This is because most students, after teachers teach, like to take a short break. Moreover, they still have many classes in a day. So, most of them prefer to work on assignments at night.

Table 5 shows that the learning environment is very supportive of students' willingness to learn. However, some students felt the commotion in the learning environment did not make them lazy to study. Moreover, on average, students prefer to study in school. Besides, because they can listen to the teacher's explanation directly and because the network conditions are not supportive in their respective areas. Besides that, some of them feel that their home conditions are not comfortable for studying. Like the results of interviews with the following students:

"I'm used to the noise. I usually study while working in the market. The noise in the market and the dirtiness of the market did not make me lazy to study, let alone approach tests." (Student J)
"Noise at home makes me lazy to study. I prefer listening to the teacher's videos using a headset." (Student K)

The next aspect is the condition of the students themselves. Table 6 shows that the condition of students when they were tired affects them to focus on learning. Especially in History learning, teachers told stories and lectures more. Hence, it is better if History subjects should not be in the afternoon but the morning. Besides, students consistently answered that they did not feel tired when doing assignments from teachers and listening to History lessons.

> *"I like studying history because it's like listening to stories and it's like reading comics or storybooks. The difference in history occurs in the past."* (Student L)

Students feel less excited or bored when they do not have supporting facilities for learning. It is easier for students to open material and do assignments via a laptop than a smartphone. In contrast, not all students have laptops as the result of the interview with the students.

> *"I have difficulty answering the teacher's assignment if using a smartphone. Luckily the teacher allowed us to do the assignment by hand, and then the assignment was photographed and sent via WhatsApp or Google Classroom."* (Student N)

3.2.2. Teacher's perception of e-learning in teaching History

Most of the History lessons carried out by teachers have used the lecture method. Later, when now the teacher switches to using the e-learning method and the home visit method. The History teacher in this research subject uses two types of e-learning methods: synchronous and asynchronous [40]. This is because not all senior high schools in the research location had the same student conditions. Most History teachers used an asynchronous type of e-learning. It was complicated to implement synchronous e-learning. Students were usually not disciplined when the teacher presents through virtual meetings via Zoom. Some students have poor networks. Therefore, they often came in and out. Besides, the Zoom application spent a lot of internet packages. So, especially History teachers used the synchronous e-learning method only at certain times. This result is in line with the result of Kearns [41] who recommend to use synchronous technologies in appropriate time. For example, during the first meeting or for reviewing the material before the exam.

The school prefers to implement asynchronous e-learning using Google Classroom, WhatsApp and sometimes sending learning videos via YouTube. These three applications are the most widely used by History teachers. The three applications are easy to use and are familiar to students. The following are the results of interviews with History teachers regarding the methods used during online learning.

> *"At the beginning of my class, I often used virtual meetings using the Zoom application. However, only half of the students attended frequently. When I asked students, they answered with various reasons. The main reason is the poor network."* (Teacher A)
> *"Student concentration was very lacking during virtual meetings. Their first 15 minutes were active. But after that many people turned off the video and suddenly disappeared."* (Teacher B)
> *"The application that I used the most was Google Classroom. I send the material, and students submitted assignments through Google Classroom. Sometimes I made learning videos and sent them via YouTube. Students enjoy watching my videos. Supported by a combination of images and audio attracted students' attention."* (Teacher C)

Besides, there were also schools whose the History teachers applied the e-learning method and home visit method. The methods were done because not all students have facilities such as the internet, smartphones or laptops. Hence, the teacher made study groups for them. The teacher distributes worksheets or materials to the students. So, the learning process during the COVID-19 pandemic could run well.

Teachers' learning media during online learning were textbooks, worksheets, e-modules, power points, audio, and instructional videos. The learning media most often used were textbooks, power points, and worksheets. Not all History teachers always made videos learning. Few teachers often send voice notes via WhatsApp.

> *"Most of us use history textbooks, material summaries made in PowerPoint, and worksheets for students to work on."* (Teacher E)
> *"I often make simple learning videos before class starts. The Kinemaster application helps me make videos."* (Teacher F)

The History material provided during online learning was adjusted to a history textbook following the applicable curriculum. Most History teachers did not assign assignments to students occasionally. They usually gave assignments after two meetings. Not all students did assignments. Sometimes they did not collect assignments on time.

Overall, History teachers mostly prefer to teach face-to-face. Some of the reasons they stated were: i) Face-to-face learning can establish better interaction and intimacy with students; ii) Students do not learn optimally so that students do not understand the material being taught; iii) Activities such as visits to museums or historical sites cannot be carried out directly. So, students only see it from photos or videos; iv) Group discussions and student presentations cannot be carried out optimally; and v) Problems with the internet network and the facilities that students have, making learning ineffective.

4. CONCLUSION

In the implementation of e-learning on History learning, the students are interested in studying the teachers' material but they prefer summarizing to memorizing the materials. Besides, they prefer to do asynchronous learning because of the noisy condition when doing synchronous learning and the internet problem. Hence, they get bored and do not focus on synchronous learning since they feel tired of waiting the better internet network. In addition, History teachers also prefer to do asynchronous learning and to use e-learning applications such as Google Classroom, WhatsApp, and YouTube.

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BIOGRAPHIES OF AUTHORS

Jamiludin 🆔 👤 SC P is a lecturer at History Education Department at Halu Oleo University. He graduated from master's degree at Gadjah Mada State University. Then he graduated Doctoral program at Makassar State University. His interests are history education, and sociology. He can be contacted at email: jamiluddin@uho.ac.id.

Darnawati 🆔 👤 SC P is a lecturer at History Education Department at Halu Oleo University. She graduated from master's degree at Halu Oleo University. Then she graduated Doctoral program at Jakarta State University. Her interests are history education, technology education. She can be contacted at email: darnawati@uho.ac.id.