Japanese Language E-Learning Readiness During the Covid-19 Pandemic at High Schools in Buleleng Regency

Kadek Eva Krishna Adnyani(✉), Desak Made Sri Mardani, Ni Nengah Suartini, and Yeni

Japanese Language Education Department, Faculty of Languages and Arts, Universitas Pendidikan Ganesha, Singaraja, Indonesia
krishna.adnyani@undiksha.ac.id

Abstract. The purpose of this study was to analyze the Japanese Language E-Learning Readiness (ELR) of students, teachers, and materials from the perspective of high school students in Buleleng Regency who participated in online learning during the COVID-19 pandemic. The research approach used is a qualitative descriptive approach. The subjects in this study were 412 students from 31 classes in 3 high schools in Buleleng Regency. Data was collected using semi-structured interviews and open and closed online questionnaires. The results showed that the score for the students' ELR is 3.3 (Not ready, needs some work), the teacher's ELR is 3.57 (ready but needs a few improvements), and the material ELR is 3.47 (ready but needs a few improvements). Policymakers may prioritize online learning facilities, analyzing and bridging learning gaps, supporting teachers in managing online learning, and developing a more sustainable educational system.

Keywords: e-learning · e-learning readiness · Japanese language · high school · pandemic

1   Introduction

COVID-19 has flipped the world on its head. Every aspect of life has been influenced. How we live and engage with one another, work and communicate, and move and travel are all factors [1, 2]. Every element of our lives, including education, has been impacted. The outbreak adversely influenced people's well-being, including pupils' education programs. Due to the crisis, the educational curriculum of nearly 250 million students worldwide was interrupted [3]. When a school shutdown is implemented as a containment mechanism, distance education (e.g., a TV or radio program) and online learning are alternatives [4, 5].

In hopes of preventing the virus from spreading throughout the school community, the Indonesian government ordered school officials to perform learning and teaching from home [6, 7]. Due to school closures in Indonesia during the COVID-19 outbreak, 45.5 million pupils and 3.1 million instructors have become reliant on online teaching

and learning [8]. This "Study from Home" policy avoids physical contact and keeps a safe distance. In other words, in a matter of seconds, the Pandemic COVID-19 transformed the entire institution and changed the entire teaching apparatus [3, 9].

The transition from offline to online learning is felt throughout Indonesia, including in Buleleng Regency. Buleleng Regency is one of the regencies in Bali, Indonesia, that carries out online learning during the COVID-19 pandemic following the circular letter of the Buleleng Regent and the Governor of Bali. Learning transitions happen very quickly. On March 16, 2020, Buleleng Regent Circular Number: 420/990/PEM/III/2020 was issued, and online learning began immediately on March 17, 2020 [10, 11].

Everything must now be modified in preparation for the delivery of online lectures. The focus is now on how online learning can provide a good education [12, 13]. Researchers have begun to explore the implementation of e-learning as an alternate approach [9, 14]. E-learning uses digital technology to create educational resources for teaching and learning, instruct learners, and govern courses to obtain a high percentage of student academic achievement. With the widespread use and expansion of multimedia and network technologies such as high-speed Internet, smart devices, and sophisticated learning management system features, e-learning has blossomed [6, 15].

While learning at home, there are many ways to complete the learning process. WhatsApp and Zoom were among the most popular tools for sharing knowledge. There are also many learning management systems for teaching and learning processes, such as Google Classroom, Schoology, and Edmodo [6]. E-learning has clear advantages over traditional learning (e.g. face-to-face classes, seminars, lectures), as it allows flexibility in terms of location and time in the learning process. On the other hand, some studies have shown that e-learning has drawbacks. For example, the lack of face-to-face communication slows the individual's socialization process [6, 15].

Not all academic institutions are prepared for abrupt change. The schools in rural Indonesia do not have the same resources and capabilities for distance learning as those in capital cities. Their community members have faced additional obstacles as a result of this issue. Not all pupils are familiar with online learning. Furthermore, many teachers and lecturers are not yet adept at using online education services, particularly in diverse parts of Indonesia [17].

This pandemic has created enormous issues for instructors and students [4, 6]. Many teachers, for example, were inexperienced with virtual classrooms and lacked computer abilities, especially e-learning skills. Many students had access to smartphones but could not afford a personal laptop and the cost of internet connectivity. Also, they were owing to a lack of understanding of the device's value as an academic tool [3, 14, 18].

A preliminary interview study was conducted with five Japanese language teachers at three public high schools in Buleleng Regency who were conducting Japanese online lessons due to the COVID-19 pandemic. The preliminary study results show that there are obstacles to learning Japanese online, especially concerning the students, the teachers, and the learning materials.

Identifying students', teachers', and material e-learning readiness (ELR) became a primary concern for every educational institution during a crisis that necessitated a quick turnaround [7, 19–21]. Policymakers can use the outcomes of the readiness test to develop more effective strategies for adopting e-learning and assuring overall success

[10, 11, 21]. Especially in Indonesia, students' learning standards and learning disparities are serious issues [18, 22, 23].

Various scientific studies have been undertaken to investigate concerns with online learning readiness. Kebritchi recognized issues relating to online learners, instructors, and content development as three critical categories of outcomes [24]. The Chapnick readiness model categorizes a wide range of elements into eight categories to help professionals evaluate the system's many diverse stakeholders. Psychological, sociological, environmental, human resources, financial, technological skills, equipment, and content are the eight ELR (e-learning readiness) aspects described in this model [25]. In this study, Chapnick and Kebritchi's theories are combined to complement each other and explain the aspects that must be considered when evaluating ELR.

Based on the above, the purpose of the study was to analyze the Japanese Language E-Learning Readiness (ELR) of students, teachers, and materials from the perspective of high school students in Buleleng Regency who participated in online learning during the COVID-19 pandemic.

2 Method

The study's data was gathered using a survey asking students to rate their instructor, material, and personal preparation for e-learning. The following is information on the participants, the survey instrument, and the study protocol.

2.1 Participants

The online surveys were sent to 970 Japanese Language Course students in Buleleng (SMAN 1 Banjar, SMAN 2 Gerokgak, and SMAN 1 Kubutambahan), who participated in online learning until November 2020. The online questionnaire was completed by 42.47% (412 students) of the 970 students.

2.2 Survey Instruments

This study employed standardized techniques to obtain accurate, reliable, and comparable evaluation outcomes. The e-learning readiness of Indonesian high school pupils was assessed using a three-section survey. The first section consisted of three items to collect information about the subject's demographic: sex, age, class year, and major.

The second section contained 22 closed-ended questions developed from [24] and [25] to measure the e-learning readiness (ELR) of students, lecturers, and material. The option was classified using a five-point Likert scale (ranging from strongly disagree to strongly agree). The expected level of readiness is given as the 3.41 mean score. This mean average was calculated after determining the crucial threshold: 4 intervals/5 categories = 0.8.

The readiness level was calculated using the E-Learning Readiness Assesment Model by [26]. Score 1–2.6 is assessed as "not ready, needs a lot of work", and score 2.6–3.4 is assessed as "not ready, needs some work". A score of 3.4 is the expected level of

readiness. Score 3.4–4.2 is assessed as "ready but needs a few improvement". Lastly, a score of 4.2–5 is assessed as "ready go ahead".

The third section comprised eight closed-ended and one open-ended supporting question to collect more information about the student's e-learning experience. This segment also supplement the data needed for the e-learning readiness study.

The eight closed-ended questions were the students' opinions on online learning, such as their preference between face-to-face and online learning and the primary advantages and drawbacks of e-learning. The last two open-ended questions were on the students' general e-learning impressions and suggestions.

2.3 Procedure

Once the survey instrument was set up, the question was input into Google form. Furthermore, the Google form link was distributed via WhatsApp group to all students of the Japanese Language Course in SMAN 1 Banjar, SMAN 2 Gerokgak, and SMAN 1 Kubutambahan. They have attended online learning in the odd semester of 2020/2021. The Google form Link began to be deployed on December 1, 2020, and closed on January 31, 2021.

3   Result and Discussion

3.1   Result

3.1.1   Questionnaire Data Section 1
This section consisting of four questions related to the subject's demographics (Table 1).

Females make up 62% of the responders. The participants' ages were dominantly 16 years old (40%) and 17 years old (32%). The majority of students (52%) were in grade X, followed by grade XI (26%) and grade XII (22%). The majors of the students were Language (66%), Science (18%), and Social Studies (18%).

3.1.2   Questionnaire Data Section 2
The questionnaire's second section is a closed questionnaire. This section comprises 22 questions from students, teachers, and materials on online learning readiness.

Based on the results of the questionnaire data, the ELR obtained are displayed in Fig. 1.

Figure 1 shows the readiness of online learning as seen from 3 factors: the e-learning readiness of students, teachers, and materials. The students' readiness scored 3.3, teacher readiness scored 3.57, and material readiness scored 3.47.

3.1.3   Questionnaire Data Part 3
The third part of the questionnaire is a supporting questionnaire. The third questionnaire consists of 2 open-ended questions and eight closed-ended questions. This questionnaire

Table 1. Subject Demographics

Background Information	Category	Percentage
Gender	Male	38%
	Female	62%
Age (years)	15	23%
	16	40%
	17	32%
	18	20%
	19	1%
Grade	X	52%
	XI	26%
	XII	22%
Major	Science	18%
	Social studies	18%
	Language	66%

Table 2. Questionnaire Data Section 2

Topic	No	Component	Total Score for each school			Total	*ELR SCORE*	*ELR score* per topic
			SMAN 1 Banjar	SMAN 2 Gerokgak	SMAN 1 Kubu tam bahan			
Student's ELR	1	Psychological	467	383	597	1447	3,51	**3,3**
	2	Sociological	464	383	596	1443	3,50	
	3	Environmental	407	356	524	1287	3,12	
	4	Human Resource	456	383	561	1400	3,39	
	5	Financial	406	352	528	1286	3,12	
	6	Technological Skill	423	360	547	1330	3,22	
	7	Equipment	457	399	571	1427	3,46	
	8	Internet Signal	404	355	517	1276	3,09	

Table 2. (*continued*)

Topic	No	Component	Total Score for each school			Total	ELR SCORE	ELR score per topic
			SMAN 1 Banjar	SMAN 2 Gerokgak	SMAN 1 Kubu tam bahan			
Teacher's ELR	9	Act as a facilitator	470	397	597	1464	3,55	**3,57**
	10	Transition to online	468	398	612	1478	3,58	
	11	Enthusiastic	470	394	627	1491	3,61	
	12	Time management	480	389	611	1480	3,59	
	13	Interactive	475	401	614	1490	3,61	
	14	Support student involvement	464	400	629	1493	3,62	
	15	Encourage student collaboration	445	368	596	1409	3,42	
Content's ELR	16	Development	468	391	592	1451	3,52	**3,47**
	17	Delivering via multimedia	469	394	609	1472	3,57	
	18	Learning Instruction	459	387	586	1432	3,47	
	19	Assignment Instruction	466	394	574	1434	3,48	
	20	Assessment instruction	467	397	598	1462	3,54	
	21	Feedback	453	380	602	1435	3,48	
	22	Content material	425	357	555	1337	3,24	
		Total	9963	8418	12843	31224	75,7	**10,34**
		Average	452,86	382,636	583,772	1419,27	3,44	**3,44**
		ELR score (per school)	**3,9**	**3,22**	**3,29**			
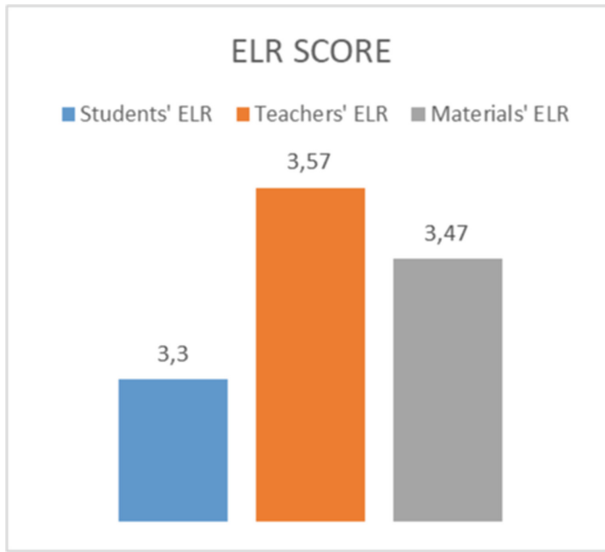
Fig. 1. Diagram of E-learning Readiness

Table 3. Preferred E-Learning Systems

Learning Method	Number	Percentage
Face-to-Face Learning	**341**	82,80%
Online Learning	**71**	17, 2%

aims to explore supporting information related to the situation during online learning. The supporting information refers to respondents' opinions regarding e-learning, applications used, applications that respondents prefer during e-learning, and respondents' impressions and messages regarding online learning taking place. The following is a closed questionnaire data obtained from 412 respondents.

Table 3 shows that 82.8% of students prefer face-to-face-based learning systems, while 17.2% of students prefer online-based learning systems.

Furthermore, Figs. 2, 3, 4 and 5 will show the perceived advantages and disadvantages of e-learning, average internet cost, and favourite learning apps.

As demonstrated in Fig. 2, 48.8% of students saw the advantages of online learning since "it can be done from anywhere". "It can be done while doing other activities" according to 32% of students. These responses were followed by others such as "more flexible time" (5,3%), "new environment" (4,6%), "more fun" (0,7%), "easier to discuss with the teacher (0,7%), and others (7%).

Figure 3 depicts the disadvantages of online learning as seen by students. In their responses, participants cited four significant disadvantages. Most participants (51%) stated they could not communicate directly with teachers and other students. Twenty per cent of participants stated that online learning assigned them too many assignments.
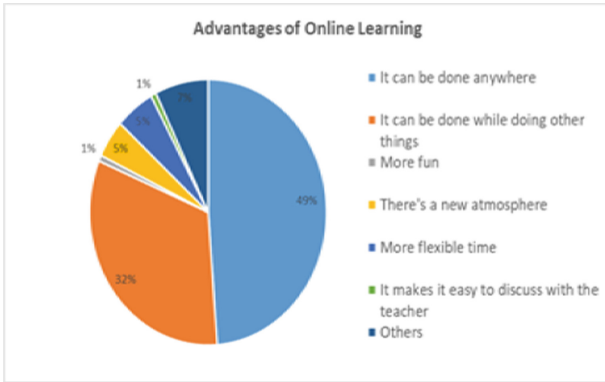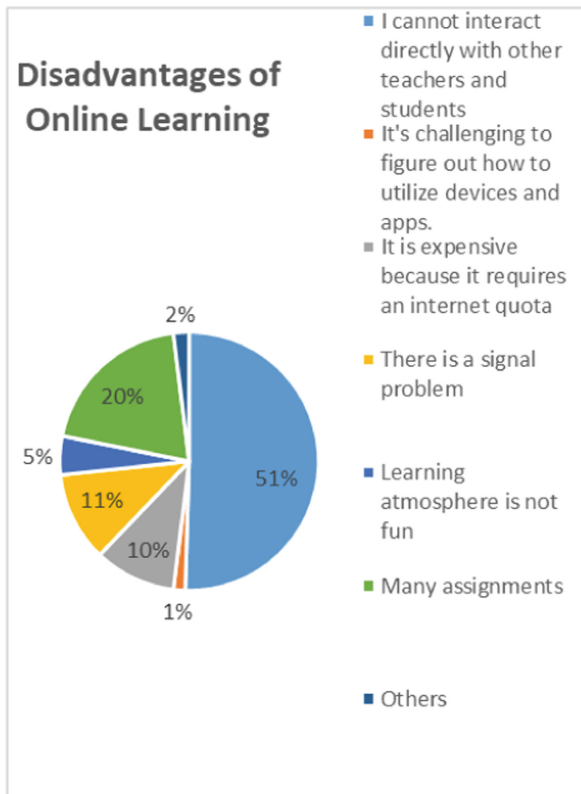
Fig. 2. Advantages of Online Learning

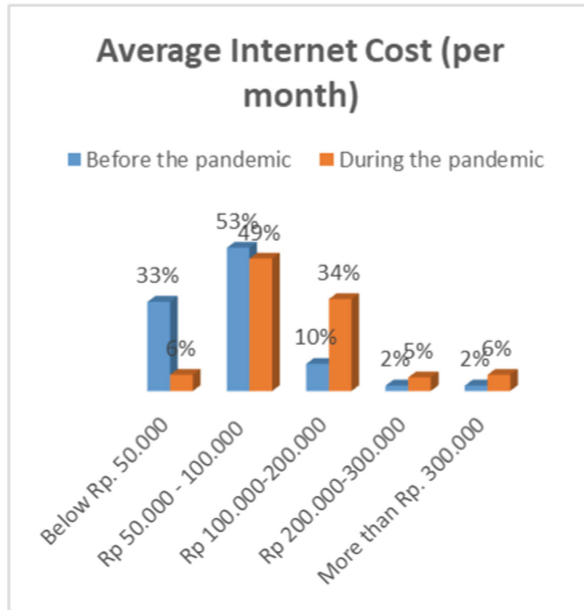**Fig. 3.** Disadvantages of Online Learning

Fig. 4. Average Internet Cost (per month) Before and During the Pandemic

Eleven per cent of students report signal issues when using their devices, and ten per cent believe online learning is costly since it requires an internet allowance.

Figure 4 illustrates the average monthly internet cost before and throughout the pandemic. Most participants spend between Rp 50.000 and Rp 100.000 before and during the epidemic. However, only 6% of participants reported spending less than Rp 50.000 each month (before the pandemic, the percentage reached 33%). 34% of participants now spend Rp 100.000–Rp. 200.000 per month, while before the pandemic, only 10% of participants spent this much on internet costs.

3.2 Discussion

The study found that 49% of students perceived the advantages of online learning as a flexible learning option, as it can be done anywhere. However, 51% of students highlighted the obstacles in classroom interactions, as they mentioned the difficulty of interacting directly with teachers and students as the disadvantage of online learning. The advantages and disadvantages of online education are in line with [6, 15].

As a consequence of online learning, the student's average internet cost (per month) rose. For example, before the pandemic, only 10% of students spent RP 100.000–RP 200.000 per month. This number rose to 34% during the pandemic. As we can see from the results of Table 2, especially the financial readiness, which only scores 3.12 (not ready, needs some work). This finding corresponds with [3, 14, 18], which mentioned that many students had access to smartphones yet could not afford the cost of internet connectivity.
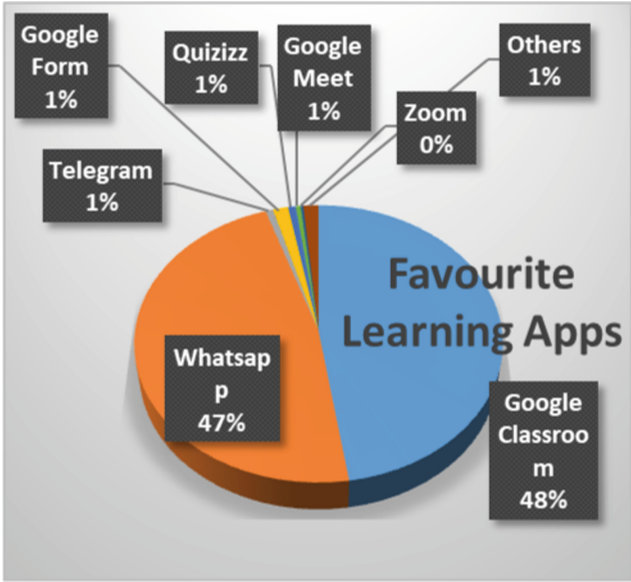
Fig. 5. Favourite Learning Apps

Table 4. The Level of Readiness

Category	Mean Score	The Level of Readiness
Students' ELR	3.3	Not ready, needs some work
Teachers' ELR	3.57	Ready but needs a few improvements
Materials' ELR	3.47	Ready but needs a few improvements
OVERALL	**3.44**	**Ready but needs a few improvements**

When asked about their favourite learning apps, the percentages for Google Classroom and WhatsApp were almost similar (48% and 47%). This finding is commensurate with [6], which mentioned Indonesia's favourite apps used for online learning (Table 4).

After being converted to the Assessment Model of the E-Learning Readiness [26], it is found that the total mean score (Mo = 3.44 > Melr = 3.41) is higher than the expected level of readiness. It can be concluded that the ELR on the online lecture from the perspective of high school students in Buleleng Regency who engaged in online learning during the COVID-19 epidemic is "ready but needs a few improvements". Only students' ELR gets into the "not ready" category, with the lowest score on the internet signal component (3.09) and the highest on the psychological component (3.51).

Meanwhile, teachers' ELR is categorized as "ready" even if it needs to be improved, with the lowest score on the encourage student collaboration component (3.42) and the highest score on the support student involvement component (3.62). Lastly, even if it

requires work, materials' ELR is included in the "ready" category, with the lowest score on content component (3.24) and the highest on multimedia delivery (3.57).

4   Conclusion

We have argued throughout this work that during a crisis that required a speedy turnaround, identifying students', instructors', and material e-learning readiness (ELR) became a top priority for every academic institution. In particular, we investigate the ELR from the perspective of high school students in the Buleleng Regency. Overall, it was found that the ELR is categorized as "Ready but needs a few improvements." Besides ELR, we also explored the supporting information related to the situation during online learning.

The findings of this study challenge the conventional ideas of online learning's superiority over traditional learning. Improvements are needed for teaching and learning material aspects. At the same time, the students require support from their environment and policymakers as their ELR is categorized as "not ready, needs some work". If this problem is not tackled seriously, students from underprivileged backgrounds, such as those who are impoverished, reside in rural regions, or have impairments, will fall behind their counterparts in the same grade.

Policymakers might examine the following choices to improve education reforms and performance: First, guarantee that all children have a decent start to online learning. Second, focus on facilities for online learning. Third, evaluate and bridge learning gaps. Fourth, recruit, prepare, and assist teachers in managing online learning. Lastly, establish a more sustainable system of education.

Authors' Contributions. Suartini devised the project. Yeni formulated the hypothesis and conducted the calculations. Mardani validated the analytical procedures. Adnyani reviewed the findings of this study. All the writers considered the findings, contributing to the final publication.

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