Article

Mapping Instructional Barriers during COVID-19 Outbreak: Islamic Education Context

Akhmad Habibi [1,2,*], Amirul Mukminin [1], Lalu Nurul Yaqin [3], Lalu Parhanuddin [2,4], Rafiza Abdul Razak [5], Nor Nazrina Mohamad Nazry [5], Muhamad Taridi [6], Karomi Karomi [3] and Fathurrijal Fathurrijal [7]

[1] Prodi Administrasi Pendidikan, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Jambi, Jambi 36122, Indonesia; amirul.mukminin@unja.ac.id

[2] Beasiswa Pendidikan Indonesia, LPDP Indonesia, Jakarta 10330, Indonesia; laluparhanuddin@gmail.com

[3] Department of English Language in Education, Universitas Gunung Rinjani, Lombok Timur 83659, Indonesia; yaqin@ugr.ac.id (L.N.Y.); omykaromy42@gmail.com (K.K.)

[4] Pendidikan Guru Sekolah Dasar, Universitas Hamzanwadi, Lombok Timur 83611, Indonesia

[5] Department of Curriculum and Instructional Technology, Universiti Malaya, Kuala Lumpur 50603, Malaysia; rafiza@um.edu.my (R.A.R.); nazrina@um.edu.my (N.N.M.N.)

[6] Postgraduate English Department, UIN Sulthan Thaha Saifuddin, Jambi 36361, Indonesia; taridi@uinjambi.ac.id

[7] Prodi Komunikasi dan Penyiaran Islam, Fakultas Ilmu Agama Islam, Universitas Muhammadiyah Mataram, Mataram 83115, Indonesia; fathurrijal9@gmail.com

* Correspondence: akhmad.habibi@unja.ac.id

Abstract: Coronavirus disease 2019 (COVID-19) is currently the most potent threat to educational systems, a crisis that may become disastrous. For the current study, a qualitative design within a case study tradition was implemented to investigate instructional barriers during COVID-19 faced by Indonesian teachers in Islamic boarding schools (Pesantren). Within this study, we applied a purposeful convenient sampling in which the access was obtained through communication with the principals of two Pesantren. Seven invited participants with more than ten years of teaching experience agreed to participate. Semi-structured interviews were addressed for data collection; each interview lasted from 40 to 50 min. The interviews were conducted in the participants' mother tongue to provide an in-depth understanding of their perceptions, ideas, and arguments regarding instructional barriers during the COVID-19 outbreak. The thematic analysis revealed three major findings regarding the barriers; technological barriers, financial barriers, and pedagogical barriers affecting instructional activities in the two Pesantren. Based on the three themes, the development of a qualitative conceptual map of teachers' instructional barriers was finalized. Recommendations are also proposed by the participants and the study for the betterment of Indonesian Islamic education facing future similar outbreaks.

Keywords: Pesantren; Islamic education; barriers; COVID-19

1. Introduction

Currently, we are amidst what is to become the most potent threat to the world of education. As of 6 May 2020, coronavirus disease 2019, or COVID-19, has resulted in more than 2.3 billion children and youth being out of school in more than 200 countries around the world, a global crisis in education. The COVID-19 pandemic has the potential to worsen the situation in education as a whole. Some worriedness about how education should be carried out during the condition are; (1) losses in learning, (2) dropout rates, and (3) children missing their social life. School closures can reduce death rates during an outbreak. For example, studies in the United Kingdom reported that the number of daily social contacts in school holidays is counted as less than that of school term days (Eames et al. 2010, 2011). The academic proofs on the school closure effectiveness and

other school social distancing strategies come from influenza outbreaks. In this case, the transmission was reported to happen more among children.

Recently, Indonesia's COVID-19 situation has also paralyzed instructional activities, including for Islamic education. The COVID-19 disaster is very influential in Indonesia's education process, where around 646,200 schools, from early childhood to tertiary education, have been closed. As a result, 68.8 million students study at home, and 4.2 million teachers teach from home. A survey, conducted by the Ministry of Education and Culture (MoEC) of Indonesia in April 2020, showed that 97.6 percent of schools had implemented learning activities from home (Al-Faqir 2020), leaving only 2.4 percent of Indonesian schools to run teaching–learning activities in schools. Many schools are faced with the challenges of internet networks to support learning. This condition is common in areas with low internet network quality, especially in rural areas. Previous studies have reported COVID-19 impacts on education in Indonesia (e.g., Abidah et al. 2020; Almanthari et al. 2020; Wajdi et al. 2020). However, fewer studies investigated the COVID-19 and Islamic education, even fewer informed about Pesantren situation during the outbreak. Therefore, this qualitative study aimed at investigating barriers faced by Pesantren teachers during school closures due to COVID-19.

2. Literature Review

2.1. COVID-19 and Education

The COVID-19 outbreak has affected education as a system from a global perspective; it leads to the near-total closures of educational institutions such as schools and universities. Almost 90% of governments around the world took a step to temporarily close schools and universities to reduce the spread of the disease (Crawford et al. 2020). As of 6 May 2020, more or less 2.3 billion students worldwide were affected since the closure policy was applied in responding to the pandemic. Following the United Nations Children's Fund (UNICEF 2020a) monitoring steps, one hundred and fifty-three countries are currently implementing national closure. Twenty-four of them are implementing local closures that affect more than 98.6 percent of the student population.

School closures affect educational stake-holders like students, teachers, students' families, and other parties that impact social economics (Van Lancker and Parolin 2020). School closures that respond to COVID-19 have highlighted some social and economic issues (Lauer et al. 2020); student debt, digital inequality, consumption insecurity, homelessness, access to childcare, health care, housing, and disability services (Van Lancker and Parolin 2020). The impact was even more felt for students with disabilities and their families; it certainly causes paused learning, decreased food nutrition, problems with childcare, and economic cost, especially for jobless families (Wang et al. 2020). Responding to the school closure, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) suggested that governments use distance learning approaches and open educational strategies so that teachers can have the opportunity to reach learners in distant learning, avoiding face-to-face meetings.

2.2. COVID-19 and Indonesian Education

By 9 April 2020, COVID-19 was confirmed in all 34 Indonesian provinces where Gorontalo, located in Sulawesi Island, reported the first-case. Jakarta and Central Java were the worst-hit. The most significant increase of cases in a single day happened 6 June 2020; nine-hundred and ninety-three cases were confirmed. Regarding recovery rates, 5 June was recorded to date the most recoveries with 550 within 24 h. As of 6 June, when this manuscript was written, Indonesia has confirmed an entire case of 30,514, the 2nd highest in Southeast Asia; Singapore was the worst. On the death numbers, Indonesia ranks 6th in Asia, with 1801 confirmed deaths (BNPB 2020). However, the number of deaths may be much larger than what has been confirmed, because of those who passed away with severe COVID-19 symptoms (Elsevier 2020). The Indonesian government has implemented

Pembatasan Sosial Berskala Besar (large-scale social restrictions). Some have ended their large-scale social restrictions and have begun to implement the new normal.

According to UNICEF (2020b), more than 60 million Indonesian students are temporarily learning from home because of COVID-19. It impacts the learning process in a very unprecedented way, in which the most difficult challenge that teachers and students face is limited access to the Internet and supporting tools (UNICEF 2020b). Parents should also focus on other challenges in financially supporting their families, leaving them with limited time helping their children as students. Responding to the challenge, the Indonesian government, through its state-owned television station Televisi Republik Indonesia (TVRI), airs an educational TV program known as Belajar dari Rumah (Learning from Home) that aims at helping students learn from home. The program, organized by the Indonesian MoEC, is broadcasted every day except Saturday and Sunday. The program is conducted for elementary and high school students covering various topics, including a parenting program to help assess the effectiveness of the programs.

2.3. Pesantren

One of the types of educational institutions in Indonesia that has been severely hit by COVID-19 is Islamic boarding schools, or Pesantren. Pesantren is affiliated with the Ministry of Religious Affairs (MoRA). Pesantren has existed in Indonesia since the pre-independence time that has an outstanding contribution to Indonesian education. Commonly, Pesantren is an Islamic-based school that combines two curriculums within their instructional activities; the national curriculum (morning) and the Islamic curriculum (afternoon) (Sofwan and Habibi 2016). Pesantren is the oldest type of school in Indonesia, comprised of a "Pondok" (a boarding school) (Dhofier 1982; Yusuf and Taufiq 2020) and a madrasah (Habibi et al. 2018). A Pesantren is similarly described as a group or community with school buildings, Islamic mosque, and boarding facilities where students and teachers live in an organization, doing not only educational activities, but also daily routines like eating and sleeping (Habibi et al. 2018; Isbah 2020; Nilan 2007; Srimulyani 2007). Most students studying in Pesantren stay in boarding rooms; they do daily activities and spend 24 h a day with their friends. Therefore, many challenges are faced in educating the students when they are out of boarding schools during the pandemic due to school closures implementation.

2.4. Studies on Barriers in Distance Education during COVID-19

Prior studies have reported barriers in distance education during COVID-19 perceived by students, teachers, and student parents (Table 1). For example, Almanthari et al. (2020) did a survey study on students (n. 159) informing two levels of barriers; school level and curriculum level barriers. Abuhammad (2020) reported that personal, technical, logistical, and financial barriers emerged from 288 parents' Facebook posts regarding education during COVID-19. Another example disclosed that teachers in Denmark had difficulties, such as level of stress, teaching time, and technical barriers in teaching Danish to refugees during the pandemic (Primdahl et al. 2020). Computer literacy, technical support, and staff readiness were barriers revealed by university lecturers working in higher education institutions during distance teaching due to COVID-19 (Almazova et al. 2020).

The reports from prior studies regarding the barriers in distance education during COVID-19 school closure produce some suggestions and recommendations for educational stake-holders on how to deal with the barriers (Abuhammad 2020; Baticulon et al. 2020; Joshi et al. 2020; Klapproth et al. 2020; Primdahl et al. 2020). Klapproth et al. (2020) proposed teacher training in improving teachers' digital skills. Furthermore, the availability of technological devices should also be the main consideration to be improved for teachers doing their distance teaching (Klapproth et al. 2020). Established online platform and proper internet access have also been elaborated and recommended to improve teachers' teaching during COVID-19. Thus, it relates to the improvement of supporting infrastructures (Primdahl et al. 2020).

Table 1. Prior studies reporting barriers in education during COVID-19.

Source	Method	Barriers
(Almanthari et al. 2020)	Survey on 159 Indonesia students	School level barriers
		Curriculum level barriers
(Joshi et al. 2020)	Interview with teachers in India	Online teaching and assessments, home environment settings
		Institutional support for online teaching and assessments
		Technical difficulties faced by teachers in online teaching and assessments
		Personal problems faced by teachers in online teaching and assessments
(Baticulon et al. 2020)	Survey with 3421 medical students in the Philippine	Technological barriers
		Individual barriers
		Domestic barriers
		Community barriers
(Abuhammad 2020)	Review analysis of 288 student parents' posts from Facebook groups in Jordan	Personal barriers
		Technical barriers
		Logistical barriers
		Financial barriers
(Klapproth et al. 2020)	Cross-sectional study on 380 teachers in Germany	Level of stress
		Teaching time
		Technical barriers
(Primdahl et al. 2020)	Interview with eight teachers in Danish preparatory classes	Virtual communication platforms barriers and
		Language barriers
(Almazova et al. 2020)	Survey with 87 university teachers	Computer literacy level
		The university electronic environment and support
		Academic staff readiness and students' readiness for online learning

3. Method

This study was conducted during the Pesantren closure that was implemented to reduce the spread of the coronavirus. The findings would be beneficial for all related stake-holders to face the educational challenges in future pandemics. A qualitative design within a case study tradition was implemented to investigate instructional barriers during COVID-19 school closure perceived by Indonesian teachers in Pesantren. In achieving the aim of the study, we set two research questions: What barriers faced by teachers in Pesantren during school closure due to COVID-19 pandemic? What suggestions informed the teachers to deal with the barriers? Stake (1995), Merriam (1998), and Yin (2014) defined a case study as a system that bounds that the researchers manage the limits or boundaries to build a clear account regarding the investigation emphasis. In a specific way, it is described as a holistic approach that considers the mutual correlation between phenomena and contexts, empirical, interpretive, and integrated design. The option of choosing a

qualitative case study in the current study was due to the study's findings that could not be generalized to the other Pesantren.

3.1. Procedures and Participants

Gaining access is very important in qualitative data collection. This study was done at two Pesantrens. Muslim students and teachers attended the Pesantren during the regular days; however, during the COVID-19 pandemic situation, students and teachers were requested to learn and teach from home. This change is difficult for them due to many factors. Within this study, we applied a purposeful convenient sampling strategy. Creswell (2007) wrote, "convenience cases [are those] which represent sites or individuals from which researchers can access and easily collect data" (p. 126). The strategy was implemented to choose the site and participants of the study (Creswell 2012). The access was obtained through communication with the principals of the two Pesantrens. Using a case study approach, the results might not represent the other Pesantren or participants. We talked to the two principals and invited the participants with their help. Seven invited participants agreed to get involved. All of them are Indonesians whose experience in teaching was more than ten years.

Regarding the protection of the human rights of the participants, informed consent was provided. Teachers' final decisions to get involved in the current study was voluntary. The right not to answer the questions we addressed was given to the participants. All participants agreed that their statements could be reported in the final version of the academic manuscript. Due to COVID-19, we used the WhatsApp call feature. WhatsApp is a free application for text messages and voice messages; it can make voice and video calls and share images, documents, user locations, and other media. Before the interview process began, we explained our study's purposes and the consequences of their statements as our data. To protect their identities, the participants informed us that they do not want their real names to be reported; therefore, we hid the names and research sites using pseudonyms. We used U1, U2, U3, U4, U5, U6, and U7 as the codes.

3.2. Data Collection and Analysis

We used semi-structured interview techniques of data collection. The interview calls were conducted in Indonesian language to provide a more understanding of the participants' perceptions, ideas, and arguments. Each online interview lasted from 40 to 50 min. Using an interview protocol, the participants were asked to explore their shared thoughts about instructional barriers during COVID-19 in Pesantren. In dealing with the research's trustworthiness, the researchers applied member checking and reflexivity (Lincoln and Guba 1985). In verifying results and interpretation accuracy, member checking was implemented by giving back the transcript to the participants to ensure their agreement with the reported quotations (Creswell 2012; Mukminin et al. 2015; Mukminin and McMahon 2013; Habibi et al. 2020).

Researchers have always obtained tough challenges during data analysis in a qualitative study, since the data were difficult to analyze; data analysis is very time-spending. Chenail (2012, p. 266) expressed that "One of the biggest challenges in conducting qualitative data analysis is deciding on what piece of the data constitutes a meaningful unit to analyze". In this study, to proceed with the interviews' semi-structured data, we listened to the video recording and transcribed all interviews. Furthermore, we carefully read all the transcripts after reading the line-by-line or word-by-word. We obtained the sense, having potential as qualitatively meaningful undivided units to analyze. A word processing tool was used in Microsoft Word, called "Macros" (Habibi et al. 2020).

3.3. Choosing a Tool for Qualitative Data Analysis

When qualitative researchers transcribed recordings, they frequently face challenges with significant amounts of text data that sometimes consist of hundreds of pages. Consequently, they have limited time to manually compute the transcription. However, many

researchers have developed software, like CAQDAS, ATLAS.ti, N6, and MAXqda, to help them with the data analysis. The available software can also enable qualitative researchers to structure qualitative data. Microsoft Word tables (La Pelle 2004) or Microsoft Word macros (Ryan 2004) were utilized to code and retrieve the transcriptions. Excel can be used to analyze qualitative data (Amozurrutia and Servós 2011; Meyer and Avery 2009). Besides, Prujit (2012) developed methods for using a relational database using Microsoft Access. Having explored the functions of these programs, we finally decided to utilize macros in Microsoft Word for this study, since they are efficient. The use of macros was implemented through extracted comment macros (Ryan 2004). The macros created a new document from comment extraction; minor adjustments were addressed to the styles. The extracted comments included a header within some information, the document's full name, the document creator's name, and the date of creation. We filed the comments and metadata into some tables.

4. Findings

Following the participants' statements obtained during the interview, three main educational barriers are reported in this study as the main themes. Seven sub-themes are included within the three themes (Table 2). Technological barriers consist of lack of internet access, lack of knowledge, and limited technological tools. Financial barriers include no financial subsidy and salary cuts. Pedagogical barriers are a lack of quality of content delivery and limited social interaction. One additional theme elaborated is suggestions informed by the teachers; it includes the improvement of infrastructures, financial aids, and teaching training.

Table 2. Themes and sub-themes.

Themes	Sub-Themes
1. Technological barriers	(a) Lack of internet access (b) Lack of knowledge (c) Limited technological tools
2. Financial barriers	(a) Financial subsidy (b) Salary cut
3. Pedagogical barriers	(a) Lack of quality of content delivery (b) Limited social interaction
4. Suggestions	(a) Improvement of infrastructures
	(b) Financial aid
	(c) Teaching training

4.1. Technological Barriers

During the COVID-19 pandemic, digital technology has had a very significant role in facilitating school activities through online learning. The most effective way of facing the challenges of conducting the teaching and learning process during COVID-19 is the integration of digital technology in an online learning environment. Digital technology allows students to find entirely new answers to what, how, where, and when they learn. Technology can encourage teachers and students to access specialized materials beyond textbooks, in multiple formats, and in ways that can bridge time and space. Alongside great teachers, intelligent digital learning systems cannot just teach students. Still, they can simultaneously observe how they study, how they learn, the kind of tasks and thinking that interest all stake-holders, and the type of problems found to be tedious or difficult. The systems can then adapt the learning experience to suit our learning style with far greater granularity and precision than any traditional classroom setting possibly can. However, in this study, digital technology integration in facilitating distance learning is perceived as the main barrier that most teachers reported in Islamic education. Among the barriers, lack of Internet access was the most prominent barrier to face since the network is limited or even

unavailable, especially in rural areas, where most Pesantrens are located. Both students and teachers living in rural areas faced similar barriers with lack of internet access.

> *"Students from rural areas have trouble in using the Internet for distance learning. Internet access is good in the city center; however, when someone stays in a rural area, the access is horrible"*, (U2)

> *"Most students in my Pesantren are from rural areas, and it is hard for them to get access. For example, one of my students who live in a mountainous area should go to a certain higher place to be able to contact me via video calls"*, (U5)

> *"The problem is not only faced by students but also teachers who live in rural areas. They have limited access to the Internet"*. (U1)

Besides the limited access to the Internet for Pesantren students and teachers who live in rural areas, lack of knowledge in using the technology is also reported to be one of the barriers for distance learning during the outbreak. Even though a few teachers, especially young teachers, have not encountered any difficulties in using technologies for teaching, most of the teachers revealed the complexity of technology used in the teaching and learning process during COVID-19 in Pesantren as the barriers. Various technological devices, such as smartphones, laptops, and e-learning applications, gave related parties, teachers, and students a major holdback. The technology integration into teaching is a complex process; the integration includes many tools with various advanced algorithms and features implemented for the betterment of instructional activities.

> *"I am still new in using the e-learning platform on my smartphone. I had no idea what Zoom looks like. Even though I have already understood the application, my students are still alienated from it. So, we can't use it. We just use WhatsApp during assessment submission"*. (U4)

> *"In Pesantren, students are not allowed to use smartphones. Thus, I can not guarantee they ca use it during the pandemic. Two of my students even do not know how to use WhatsApp"*. (U6)

Most of the students already had smartphones that could be used as technological devices for learning from home activities during the school closure period in Indonesian Pesantren. However, a few of them have not yet possessed any devices, smartphones, or laptops to carry out the task. One of the teachers (U5) said that three of his students did not have any devices that could support them in learning during the pandemic. It is related to the economic ability of the students' families. Not all students are from a financially supportive background. Additionally, some of the students' parents do not have jobs or were hit by job cuts during the PSBB.

4.2. Financial Barriers

As stated previously, Internet access is one of the main barriers to distance learning during COVID-19. Financial support from the government to purchase internet packages during the outbreak is still limited, with a lack of financial subsidy. Especially in Pesantren, limited financial subsidies were distributed to the students for purchasing internet credits when this study was conducted. It was revealed by two of the teachers in the interview,

> *"Limited financial support was provided by the government amidst the pandemic. Especially when the students want to buy internet packages"*, (U7)

> *"The students are majorly from families whose parents are farmers. Even before the pandemic, the economy was difficult for them. As a result, their ability to buy internet packages is the holdback in facilitating students during distance learning"*. (U3)

Besides complaints about students' financial problems, financial subsidy was also limited for teachers for internet credit purchasing when this study was conducted. One of the teachers informed us that they have a small amount of money to support them from buying Internet credit; therefore, it was a tough challenge for them to work from home

during COVID-19. Another teacher revealed the financial condition preventing him from committing to teaching and learning during the pandemic,

"I have to do other jobs to support my family. I have three children, and they have to survive in this situation. Besides my job as a teacher, I have to do carpentry. To consider buying internet packages is something I cannot manage". (U6)

For teachers, salary cut is another dilemma as a challenging financial barrier. Many employers had filed bankruptcy when the economy started to unravel because of the coronavirus pandemic. Luckily, many who work in the educational sector are still working and getting their income from jobs; one of these jobs is the teaching profession. However, some of the teachers working in private educational institutions had pay cuts, since they are self-funding with little support from the government. It also happened for Pesantren teachers. Two participants remarked,

"I got a pay cut almost 30% from the Pesantren I work. It is a very difficult and I have to look for other sources for supporting my family. It affects the distance learning". (U3)

"The salary cut is tough. Even with a normal situation, our stipend from Pesantren is not sufficient; we can not make our lives better financially. With three children, it is not enough". (U2)

Besides economic stimulus in all countries for keeping food supply, the educational sector should also be supported to keep the educational process on track. Stimulus measures that tackle the educational barriers would reduce the severe gap between educational institutions, especially between state-owned and private-owned schools.

4.3. Pedagogical Barriers

In addition to technological and financial barriers, the participants of the study also mentioned pedagogical aspects, including the lack of quality of content delivery and limited social interaction. Content delivery is very important in education. In a normal situation during face-to-face instruction, teachers can make many approaches to deliver content or learning materials to students in the classroom. The content delivery approaches that teachers use are very influential components for the success of the teaching and learning process. However, during distance education, due to COVID-19, some teachers informed us that the quality of content delivery is decreased. Thus, it becomes one of the barriers revealed in this study. The issue emerges when the teachers have new experiences with online learning in which they have problems to understand the situation of the class, the mood of the students, and the dynamic of the content delivery. Besides, effective and efficient presentation in teaching is also hard to achieve during COVID-19. Another participant revealed that he had difficulties in structuring the learning activities. Three of the interviewees reported the issues,

"Regarding the pedagogy, I think one of the barriers is our weaknesses to deliver the content of the learning materials. During face-to-face education, we can analyze the situation of the class, the mood of the students, and the dynamic of the content delivery. We can not do those three factors during online learning. Thus, the quality of the delivery for me is a bit lowered", (U1)

"It is important to have an effective presentation during teaching and learning process. I have difficulties in this thing during distance learning during COVID-19. With the absence of face-to-face meetings, it is difficult for me to have an effective and efficient instructional presentation". (U4)

"When I teach online or in the distance, it is hard to order the learning activities. It is even harder with the limited facilities and funding we have during distance. In a normal situation, we can structure our activities in accordance with the lesson plan". (U5)

Another concern revealed by the participants of the study is the inexistence of social interaction. The social interaction among students is an important factor to determine the

success, or otherwise, of the teaching and learning process. In the face-to-face classroom, students are expected to have knowledge and social interaction. In educational institutions, students frequently have interaction before, during, and at the end of meetings. This is when friendships among them are built through many styles and activities of communication or interaction. However, in distance education due to COVID-19, the participants of the study informed us that students and teachers are not represented in physical interaction. They become disembodied entities and in the majority of cases do not meet face-to-face physical bound. Thus, it is not easy to conduct pedagogical activities due to the lack of visual expressiveness by the participants involved. These barriers can lead to being the reason behind the lack of sense of community in distance education during the pandemic. Three of the teachers had opinions on this matter,

> *"In face-to-face meetings, social interaction is built in a comprehensive way; students can directly interact with both teachers and peers. In this kind of situation, it cannot be done since we do not meet physically"*, (U2)

> *"There is no social interaction between students and students as well as between students and teachers. The teaching and learning process can be run effectively if this condition continues. We need to give feedback, encouragement, and evaluation better if we meet in face-to-face meetings"*, (U6)

> *"Pesantren is a community-based school where students interaction can be 24 h; they learn religious objects in the afternoon and night and national curriculum in the morning. During the pandemic, the absence of this kind of interaction makes pedagogical activities harder"*. (U5)

4.4. Suggestions

Three main suggestions informed by the teacher regarding the instructional barriers faced in Pesantren are; improvement of infrastructures, financial aids, and teaching training. In the interview, Pesantren teachers who have difficulties with access to the Internet hope the government to improve the quality and quantity of the infrastructures supporting Internet access, especially for teachers and students living in rural areas. One of the teachers stated,

> *"It is important to have good access to the internet during the school closure during the pandemic. I hope that the government can improve the infrastructures, especially in rural areas"*. (U2)

The participants also revealed that Pesantren teachers need more financial aids during distance teaching due to school closure. They argued that without sufficient funding from the government, they cannot support the instruction. One of the teachers revealed that financial help from the government is needed to help them buy any required tools and charges for teaching from home. Even though not all teachers agree that one of the key factors for Pesantren teaching during the pandemic is about the teaching training to improve pedagogical knowledge among Pesantren teachers, some senior teachers argued that the training is needed to improve their distance teaching quality. One of the senior teachers informed us,

> *"I am not really at using technology for teaching. So, training is needed for me on how to use technology for pedagogical activities. I even need to know how to use some unfamiliar technologies, like Zoom and Edmodo"*. (U3)

5. Discussion

Under the current government, the Indonesian MoEC has addressed measures in preventing the spread of COVID-19 at schools by closing them, since the outbreak escalates daily. MoEC suspends all by deciding to issue a policy of distance learning. Following its procedure, MoRA, which oversees Pesantrens, issued a similar approach with Circular Letter No. B-686.1/DJ.I.I/PP.00/03/2020. MoEC and MoRA free each school to opt

for its preferred online-based learning tools. However, a certain e-learning website has been specifically introduced on https://elearning.kemenag.go.id/web. For schools with limited technological, financial, and pedagogical supports, the new approach is difficult to implement due to the resources they have during the outbreak. Thus, they revealed some instructional barriers in this study.

In this qualitative study, teachers that we interviewed revealed Internet connection as a significant holdback in implementing distance learning. The unprecedented shift from face-to-face or traditional teaching to distance education from students' and teachers' homes exposes the need for appropriate internet access. The uneven access to the Internet is currently exposing an educational vulnerability for distance learning introduction in the Indonesian educational system. Especially for those who live in urban areas, Internet access is a luxurious thing to have. In general, a persistent disparity in access to technology emerges in Indonesia, between big cities and small cities (Muttaqin 2018), causing the difference in students' quality of both areas. Besides access to the Internet, the current study informs that limited knowledge among teachers in Pesantren is also a barrier in teaching and learning processes during the pandemic. Several studies have also revealed that technical or technological barriers have urged teachers to limit their time using technologies during distance teaching due to COVID-19 (Abuhammad 2020; Almazova et al. 2020; Baticulon et al. 2020; Joshi et al. 2020; Klapproth et al. 2020). The complexities produce barriers such as teachers having limited knowledge regarding technology integration during the pandemic. This phenomenon has also led the technological diffusion in Indonesian education (Habibi et al. 2020). A limited technological tool is also reported to be the barrier to distance learning during the outbreak. Not all students and teachers have smartphones or other devices to support their educational activities. Similarly, Habibi et al. (2020) and Klapproth et al. (2020) reported that frustrated teachers and students might avoid using technology in their educational activities when they have limited supportive technological tools.

In addition to the technological barrier, financial barriers are also reported to hit hard the instructional process during COVID-19 in Indonesian Pesantren. To solve the problem and promote knowledge sharing, the Indonesian government, through related ministries, has provides a free online platform known as Rumah Belajar and the program Guru Berbagi. Rumah Belajar facilitates students with materials and features for learning; Program *Guru Berbagi* provides shared lesson-plans. However, the teachers revealed that they and their students have not been subsidized to purchasing Internet credit. Therefore, they seldom go online. Habibi et al. (2020) and Abuhammad (2020) also address this matter by informing teachers and students that they may have difficulties providing a particular budget for internet access. However, in the latest program and policies by MoRA and MoEC, subsidies for Internet access have been addressed for students and teachers. During COVID-19, a salary cut might appear to be the major barrier perceived by Pesantren teachers. The sudden condition can be the major reason the teachers cannot address teaching through the use of online distance learning. This unprecedented challenge should be elaborated on more in the future, related to other socio-economic factors.

The last barriers that emerged from the results of the study are pedagogical barriers. Two salient sub-themes from pedagogical barriers are lack of quality of content delivery and limited social interaction. In detail, this finding highlights the limited understanding of the situation of the class, the mood of the students, and the dynamic of the content delivery resulting from the low quality of the content delivery. Besides, effective and efficient presentation in teaching is also hard to achieve. Difficulties in structuring the learning activities are also revealed to become the barrier included in the lack of quality of content delivery. Furthermore, less social interaction among students makes pedagogical activities become more difficult to conduct during distance learning in Pesantren. Similarly, prior studies also inform us that pedagogical or didactical barriers have become barriers to distance education during COVID-19 (Almanthari et al. 2020; Joshi et al. 2020). Almanthari et al. (2020) reported pedagogical barriers included at curriculum level barriers that include content

delivery and social interaction. Joshi et al. (2020) revealed online teaching and assessment in the context of home environment settings as pedagogical barriers in distance education during COVID-19.

Based on the findings of the study, some suggestions to overcome the barriers that Pesantren teachers face during the outbreak are also reported. The suggestions focused on the improvement of infrastructures, financial aids, and teaching training. Some previous studies also suggested similar measures to solve problems of distance learning during COVID-19 (Abuhammad 2020; Baticulon et al. 2020; Joshi et al. 2020; Klapproth et al. 2020). For example, Joshi et al. (2020) proposed the active involvement of the government in helping educational institutions to face future pandemics causing disruption in education. To support learning from home, infrastructures need to be improved, and training should be sustainable, addressing online-based pedagogy (Klapproth et al. 2020).

6. Conclusions

We mapped the barriers to model the study for policymakers, taking significant steps to ease students and teachers in conducting instruction during current and future pandemics. From the conceptual map of the current study (Figure 1), financial barriers resulted in technological barriers and both affect the existence of pedagogical barriers that are mapped to be instructional barriers during COVID-19 faced by Pesantren teachers. Some implications should be considered based on the findings. Stake-holders on Islamic education are recommended to prepare effective and efficient moves in facing future unprecedented situations endangering the education systems. Saving budgets for the situation is also important to provide more infrastructures required for distance learning. The involvement of private sectors in providing appropriate facilities and findings in supporting Islamic education is also significant. This study is limited to a few participants; therefore, more participants are encouraged for future research. The study also limited the finding into barriers and suggestions to deal with the barriers perceived by teachers in Indonesian Pesantren. Thus, observation and experimental studies are suggested to understand how the teaching and learning conducted during distance teaching in Islamic education. Other various methodological approaches, such as a big scale survey and research and development, are also suggested to help teachers deal with barriers in future school closures, especially for schools in rural areas. Finally, this springboard study, COVID-19 educational barriers in Pesantren, revealed some issues to be overcome in a normal situation. Technological, financial, and pedagogical preparedness should be considered as key factors for Pesantren teachers and policy-makers. To prepare for future pandemics, these three issues should be a major concern for all Islamic education stake-holders, authorities to issue relevant and proper policies and teachers to improve their self skills and knowledge.
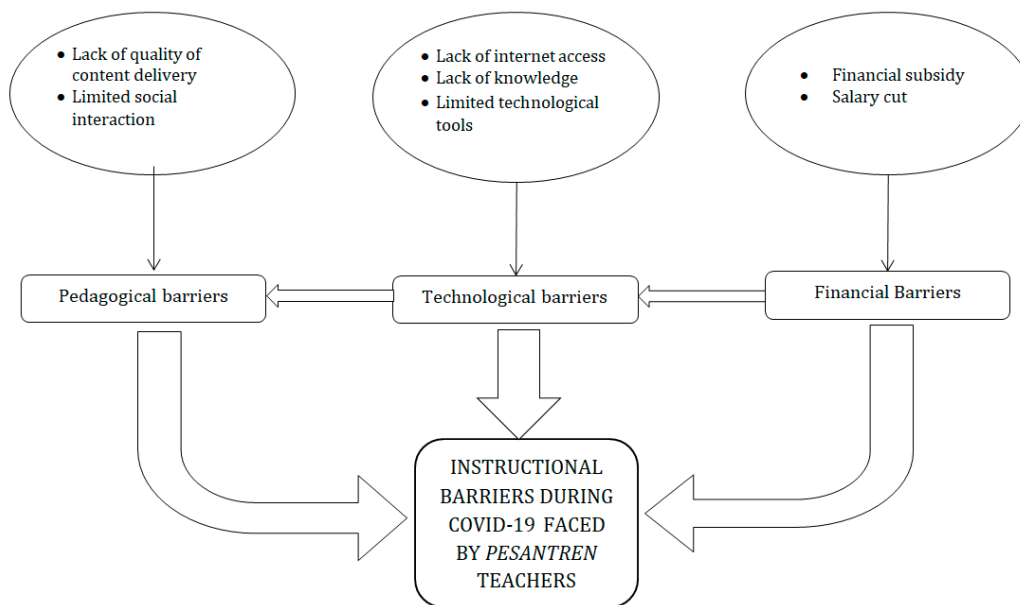
Figure 1. Conceptual map of the study.

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