

## **A Systematic Literature Review on the Online Learning During the Covid-19 Pandemic and its Implementation at the Mosque**

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**Abstract:** The mosque is not only a place of worship, but it is an institution that plays an important role as a center of knowledge in a Muslim community. However, recently the world was shocked by the outbreak of the COVID-19 pandemic which forced the country to implement Movement Control Orders. The mosque also received the impact when it was limited in the number of worshippers to perform worship there. For example, learning at the mosque physically also had to be postponed. Thus, this study attempts to see how online learning was implemented during this pandemic period. The review is carried out by performing a systematic literature review in order to identify and discover what and how online learning is being delivered. Multiple research papers and studies from the Scopus database are collected and analyzed. The findings provide insights on the best approaches in delivering online learning.

**Keywords:** Online learning, mosque, systematic literature review, COVID-19, Scopus

### **Introduction**

The COVID-19 pandemic has disrupted teaching and learning all across the world in a variety of institutions, beginning from early childhood education until higher studies. Typical face-to-face classes had to be suspended to ensure the safety of students and lecturers. Fortunately, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. The current technology enabled electronic learning (e-learning) to be the core method of teaching the curriculum during the COVID-19 pandemic.

Electronic (e) or online learning is described as the use of electronic technology and media to deliver, assist, and enhance both learning and teaching. It entails contact between students and teachers through the use of online information (Howlett et. al, 2009; Greenhalgh, 2001). Learning can be asynchronous, synchronous, or a blend of both in online education. Asynchronous learning refers to teaching and learning that does not take place at the same time, whereas synchronous learning refers to teaching and learning that takes place at the same time and is carried out through technology such as the internet (Moore & Kearsley, 2012).

When online education began in the late 20th century, most online programs and classes were synchronous and used chat rooms, instant messaging, and texting. The universal use of web sites has provided opportunities for the development of online communities and groups. Emailing, conferencing, chatting, working together via Google drive, Google doc, Google hangout, dropbox, Facebook, Twitter, etc. have been widely used in online classrooms. In discussing the best practices of online education, Finch and Jacobs (2012) stated these advantages: reducing the time and costs for travel; increasing opportunities to access and collaborate with expert professionals in a global range; providing students with flexibility to access courses at their convenience; and allowing adjustments to subjects and content needs.

### **The Methodology**

In this section the method used to retrieve articles related to online learning during COVID-19 is discussed. The authors used the method called PRISMA, which includes resources (Scopus) used to run the systematic review, eligibility and exclusion criteria, steps of the review process (identification, screening, eligibility) and data abstraction and analysis.

#### PRISMA

The review was guided by the PRISMA Statement (Preferred Reporting Items for Systematic reviews and Meta-Analyses). PRISMA is often utilized within the environmental management field. According to Sierra-Correa and Cantera Kintz (2015), it offers three unique advantages which are 1) defining clear research questions that permits a systematic research, 2) it identifies inclusion and exclusion criteria and 3) it attempts to examine a large database of scientific literature in a defined time. The PRISMA Statement allows for rigorous search of search terms related to online learning during COVID-19. The methodology can be used for monitoring online learning during COVID-19.

#### Resources

The review relied on the main journal database –Scopus. Scopus is a similar multidisciplinary and selective DB, which was launched by Elsevier in November 2004 (Baas, et al., 2020). Scopus is the bibliographic database generally accepted as the most comprehensive data source for various purposes. Scopus was launched by Elsevier. According to Zhu & Liu (2020), over the years, Scopus has earned its equal place as a comprehensive bibliographic data source and it has proven itself to be reliable and, in some respects, even better than WoS. All Scopus content is accessible with a single subscription without possible modulations.

Thus, although Scopus also includes content from many specialized databases, such as Embase, Compendex, World Textile Index, Fluidex, Geobase, Biobase, and Medline, their content is integrated and equally accessible. Scopus is one of the largest abstracts and citation databases of peer-reviewed literature with N22,800 journals from 5000 publishers worldwide. Scopus consists of diverse subject areas such as social sciences and religion too.

### Eligibility and Exclusion Criteria

Several eligibility and exclusion criteria are determined. First with regard to literature type, only article journals are selected which means article and conference proceedings are all limited to. Second, in order to avoid any confusion and difficulty in translating, the searching efforts excluded the non-English publication and focused only on articles published in English. Third, with regard to timeline, a period of the pandemic COVID-19 is selected (between 2019 and 2021), an adequate period of time to see the evolution of research and related publications. As the review process focused on online learning during the COVID-19, all articles indexed are selected. Lastly, in line with its objective which focuses on online learning during COVID-19, only articles focused in it are selected.

### Systematic Review Process

Four stages were involved in the systematic review process. The review process was performed on 26<sup>th</sup> June 2021. The first phase identified keywords used for the search process. Relying on previous studies and thesaurus, keywords similar and related to online learning and covid were used (Table 2). At this stage, 934 articles were found in the Scopus database. Then, the authors focussed 625 articles which are not from Conference Paper, Letter, Editorial, Review, Note, Book Chapter and Erratum. 31 articles were excluded because of non-English publication. The next stage is eligibility, where the full articles were accessed. After a careful review, several articles were excluded as some were irrelevant articles and did not focus on online learning during COVID-19. The final stage of reviewing resulted in a total of 22 articles that were used for the qualitative analysis (see Figure. 1).

In the research literature, online education is variously termed as “distance learning”, “online learning,” “blended learning,” “computer-based learning,” “web-based learning,” “virtual learning,” “tele learning,” “cyber learning,” “Internet-based learning,” “distributed learning. In this study we considered all of these terms to be sufficiently synonymous and used them interchangeably throughout this article. The authors also include the word “Covid” to focus the research literature.

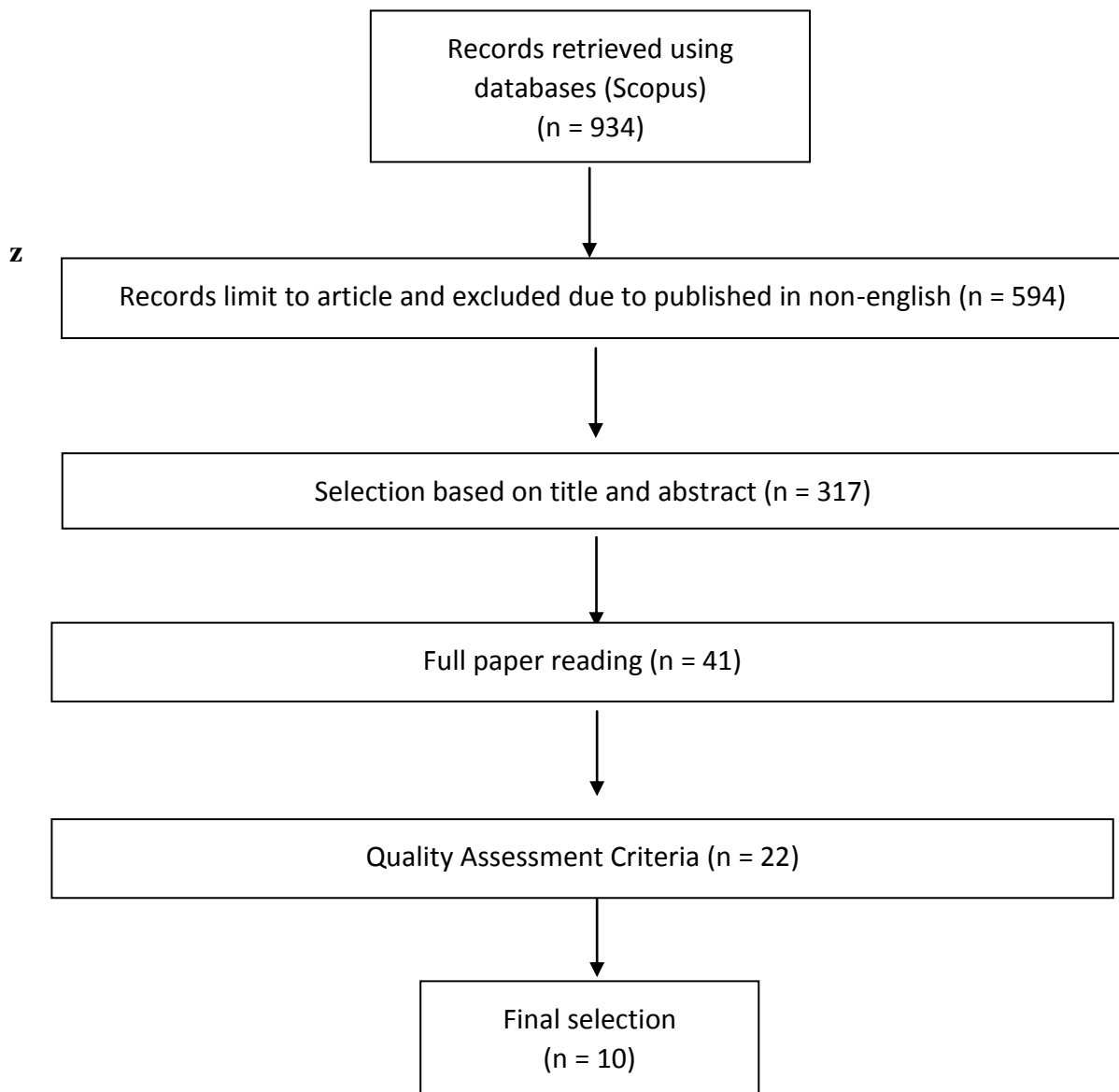
Table 1: The Search String Used for the Systematic Review Process

<b>Database</b>	<b>Keywords Used</b>
Scopus	(distance OR online OR blended OR computer-based OR web-based OR virtual OR tele OR cyber OR Internet-based OR distributed) (education OR learning) AND COVID

### Data Abstraction and Analysis

The remaining articles were assessed and analysed. Efforts were focused on specific studies that respond to the formulated questions. The data were extracted by reading through the abstracts first, then the full articles (in-depth) to identify appropriate themes and sub-themes. Qualitative analysis was performed using content analysis to identify the themes related to the online learning in the mosque. The authors then organized sub-themes around the themes that were established by typology.

Figure 1: Data Abstraction and Analysis



## **Result of Study**

Based on the Table 2, the findings of this study provide a comprehensive overview of the online learning elements that existed in issues related to COVID. The findings of the study show that there are two main themes of online learning elements that are closely linked to the issue of COVID-19. The two main themes that emerged in this study were online learning tools and quality in online learning.

### **Online Learning Tools**

Incorporating online learning, limited internet availability is a big challenge (Garrotte Jurado, et.al., 2010). However, some practitioners frequently have technical difficulties and a sluggish internet connection, slowing down the learning process. When it comes to dealing with a poor internet connection in the classroom, teachers and students have similar viewpoints. To impart education, online learning uses a variety of technologies such as the internet, email, chat, new groups and texts, audio and video conferencing supplied across computer networks. Hardware, software, and networking facilities, according to Dhull and Arora (2019), are essential for online teaching and learning. Online learning cannot achieve its goal without any of these; some people do not have ready access to a computer and an internet connection, and others who do have the necessary equipment feel ill-equipped to use it. The use of technology and the internet as a way to accommodate students' needs and engage their interest in the learning process by implementing online learning. The use of the internet also helps students be more motivated in the learning process in the classrooms.

### **Quality in Online Learning**

In some cases, online learning leads to a lack of quality in the teaching and learning process. The credibility of online courses is a source of concern for non-online faculty. Too often, online instructors do not take their lesson preparations as seriously as they should, and this lack of dedication has a significant and negative impact on the quality of online learning. In order to cultivate interest in learning among students, the management of the teaching and learning process necessitates educators who are creative and innovative. Seriousness in teaching using the most up-to-date technological alternatives can improve effective teaching and learning while also assisting in the speeding up of the student understanding process. According to Munoz-Carril, Gonzalez-Sanmamed, & Hernandez-Selles (2013), the roles, characteristics, competencies, and skills that one requires to be a competent and successful online instructor. Throughout the online course, successful online instructors encourage and facilitate active communication, interaction, collaboration, and engagement among students (Palloff & Pratt, 2011).

Seriousness in teaching using the latest technological alternatives can improve effective teaching and learning and indirectly it helps to speed up the process of student understanding. According to Munoz-Carril, Gonzalez-Sanmamed, & Hernandez-Selles (2013), the roles, characteristics, competencies, and skills that one requires to be a competent and successful online instructor. Successful online instructors promote and facilitate students' active

communication, interaction, collaboration, and engagement throughout the online course (Palloff & Pratt, 2011). These instructors should possess personal traits such as being highly motivated, supportive, visible, organized, analytical, respectful, approachable, active, responsive, flexible, open, honest, compassionate, and able to lead by example (Savery, 2005).

Table 2: Online Learning Aspect Suggested by Scholar

<b>Title of Research</b>	<b>Author(s)</b>	<b>Suggestion on</b>	<b>Problems</b>
Polish teachers of early education in the face of distance learning during the COVID-19 pandemic – the difficulties experienced and suggestions for the future	Aleksandra Kruszevska, Stanisława Nazaruk & Karolina Szewczyk	<p>i. The priority is to support the development of skills and competences related to the use of information technologies, including techniques of distance learning. The epidemic situation has made teachers and educational authorities acutely aware of the deficiencies in this area. It is necessary to equip all pupils with tablets/laptops with appropriate software in order to prevent the so-called digital exclusion, and enable participation in distance learning of children from different areas and environments in the future.</p> <p>ii. There is no doubt that the effectiveness of the work of a preschool/school depends strongly on the education, skills and personal predisposition of the teaching staff</p> <p>iii. Cooperation between several important actors is needed, including teachers, school management, parents, and the managing and supervising bodies.</p>	<p>There was a lack of information technology equipment in the pupils' homes,</p> <p>A lack of communication with the pupils and their parents</p> <p>A lack of motivation among pupils,</p> <p>Health problems had begun emerge amongst children.</p>
The COVID-19 Pandemic:	Maha Mouchantaf	i. It should be mandatory for	Students missing online

<p>Challenges Faced and Lessons Learned Regarding Distance Learning in Lebanese Higher Education Institutions</p>		<p>institutions to provide staff development programs.</p> <p>i. These strategies must not include only workshops, short courses and website support, but must also teach educators instructional design skills in order to integrate face-to-face interaction into the online environment</p> <p>ii. Schools can deliver staff development support online in order to develop skills and knowledge around online teaching.</p>	<p>sessions, or not completing the required work</p> <p>Technical complications such as incorrect or unknown passwords and platforms not working as expected</p> <p>A lack of institutional help and training.</p>
<p>Assessing Distance Learning in Higher Education during the COVID-19 Pandemic</p>	<p>Selwa Elfirdoussi, Mohamed Lachgar, Hind Kabaili, Abdelali Rochdi, Driss Goujdami &amp; Larbi El Firdoussi</p>	<p>i. The availability of information technology equipment and Internet coverage and speed are essential</p> <p>ii. The success of these changes depends strongly on the development of information and communication Distance education must be intelligently combined with face-to-face teaching, because the student relationship with the professor is essential, and distance education, paradoxically, strengthens it</p> <p>iii. Distance education must be intelligently combined with face-to-face teaching, because the student relationship with the professor is essential, and distance education,</p>	<p>Need for technical support and training in the use of these tools,</p> <p>The distance learning provided by the professors. In addition, technical challenges are one of the main reasons [13, 29] for abandoning the transition to online education; this ranges from equipment to Internet connection issues or the availability of platforms. The technical challenges of the students also play a role. The lack of digital skills is expressed by insecurity in the use of new technologies in such a</p>

		paradoxically, strengthens it.	short time. However, the speed with which this move to online instruction is expected to happen is unprecedented and staggering
Covid-19 shocks to education supply: how 200,000 U. S. households dealt with the sudden shift to distance learning	Cynthia Bansak & Martha Starr	i. An importance of distance-learning modality and its interplay with parental inputs	Parental time helping children learn in the Covid-19 pandemic varied with household characteristics, other Covid-19 shocks, and school provided inputs
Distance Education during COVID-19 Pandemic: The Perceptions and Preference of University Students in Malaysia Towards Online Learning	Husna Hafiza Razami & Roslina Ibrahim	i. The majority of the students preferred a hybrid approach in which the content is delivered online through both live video sessions and pre-recorded videos. ii. Blended format was revealed to be the most preferred learning method among respondents. iii. The most desired learning materials were online notes followed by video tutorials, quizzes, games and animation.	Connected with social interaction, Concentration and motivation in learning.
Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives	Mahmoud Al-Balas, Hasan Ibrahim Al-Balas, Hatim M. Jaber, Khaled Obeidat, Hamzeh Al-Balas,	i. It is mandatory to collaborate with telecommunication companies to provide students and instructors with high-quality internet coverage with affordable costs, also to improve instructors' skills in using technology in their	Technical and infrastructural resources reported as a major challenge for implementing distance learning, so understanding technological, financial, institutional, educators, and student



	Emad A. Aborajooh, Raed Al-Taher & Bayan Al-Balas	<p>distance learning.</p> <p>i. The delivery of educational material using synchronous live streaming sessions represented the major modality of teaching, in which 80.9% of students were engaged. Only pre recorded sessions and a mix of live and pre-recorded lessons were used in 11.2 and 8% respectively</p>	<p>barriers are essential for the successful implementation of distance learning in medical education</p> <p>The delivery of educational material using synchronous live streaming sessions represented the major modality of teaching and Internet streaming quality and coverage.</p>
Distance learning in engineering education: Challenges and opportunities during COVID-19 pandemic crisis in Pakistan	Zeashan H Khan & Muhammad I Abid	<p>i. Good internet bandwidth</p> <p>ii. Good hardware</p>	Unavailability of some of the basic hardware accessories that are needed for online teaching.
Environmental education Using distance learning During the covid-19 Lockdown in israel	N. Assaf & D. Gan	<p>i. The creativity of the educators who used a variety of teaching methods, involving active/passive learning and the direct/indirect experience of nature, using nature for observation, investigation and in-depth personal, social and environmental learning.</p> <p>ii. Recommends incorporating diverse activities in nature, implementing outdoor teacher training for all teachers and creating professional teacher networks.</p> <p>iii. Collaboration between teachers and diverse</p>	Need of flexibility and creativity when teaching outdoors in times of normalcy, due to the need to adapt their teaching to unanticipated developments and the need to mediate to students the changes involved in the environmental crisis

		<p>methods of implementation may be things in which school principals and Ministry of Education supervisors should be engaged in developing.</p> <p>Recommend providing all teachers in Israel with tools for environmental education that involves outdoor teaching and its online implementation.</p>	
Implementation of distance learning during the COVID-19 in Faculty of Education and Teacher Training	Sutiah, S., Slamet, S., Shafqat, A. & Supriyono, S.	<p>i. The learning process learning facilities, infrastructures (internet connection, device, financial support) students' psychological aspects towards distance learning needs to be accessed.</p> <p>ii. The development of learner capacity and capability with the goal of producing learners who are well-prepared for the complexities of today's workplace.</p>	Difficulty during distance learning and worrying about learning outcomes achievement
Learning in the COVID-19 Era: Higher Education Students and Faculty's Experience with Emergency Distance Education	Talal Alasmari	<p>i. The infrastructure and support efficiency directly influence teachers and students' experiences, that require more effort from higher education institutions to invest more resources in infrastructure and support. With such an investment, students and teachers can overcome most of the reported disadvantages and challenges such as low technical skills, live</p>	

		<p>interactions with teachers and peers, and heavy course load. Also, more investment in infrastructure and support will enhance all the reported advantages of emergency distance learning such as content learnability and satisfaction.</p> <p>i. Government there is a need to provide more effective infrastructure and support from the faculty. The reason is that effective emergency distance learning can only be ensured if there is proper use of IT infrastructure and devices.</p> <p>ii. There is a need for faculty to encourage online study group. The reason is that around specific courses, these groups can help provide additional support. Besides, the students' experience of emergency distance learning can be enhanced by creating these groups.</p> <p>v. There is also a need for increased social media engagement. The reason is that online students often develop feelings of isolation. Therefore, by increasing social media engagement students can be provided help to be more connected.</p>	
Towards an Efficient Integrated Distance and Blended Learning Model:	Ahmed Al-Hunaiyyan, Rana Alhajri & Andrew	i. Propose a distance and blended learning model (DBLM)- The internal and external dimensions which	Findings indicate that respondents were slightly

How to Minimise the Impact of COVID-19 on Education	Bimba	<p>underpin the proposed model include virtual/smart classrooms, distance/blended learning methodology, e-content development, educators' capability and maturity, management, social and cultural change, regulation, and equipping students with 21st-century learning skills.</p> <p>An e-learning teacher capability maturity model (eTCMM) was proposed to foster educators' competencies and enable their active use of elearning platforms.</p>	<p>supportive of e-learning adoption, with a majority acknowledging its advantages.</p> <p>Respondents also mention the need for development in the technological competencies required to operate the proposed e-learning programs and a range of challenges that may impact e-learning</p>
Effectiveness of Online Education for the Professional Training of Journalists: Students' Distance Learning During the COVID-19 Pandemic	Irina A. Poluekhtova, Olga Yu. Vikhrova & Elena L. Vartanova	<p>In order to achieve the social, educational, and cognitive presence necessary for effective online education, an important condition is the communication environment and stable communication among all participants: students, professors, and academic departments.</p> <p>More comprehensive research is necessary, comprising the digital media literacy of professors and students.</p>	<p>With Internet technologies, it is difficult to provide a strong teaching presence, which is a catalyst for the development of social and cognitive presence and a key component of traditional professional training.</p> <p>In the online learning mode, students are overloaded with self-study and written assignments, and mastering the necessary professional knowledge, competencies, and skills become their own responsibility.</p>

### **The Needs of Online Learning in the Mosque**

The mosque is an institution that plays an important role in the Muslim community. The strength of Muslims depends on the function of the mosque. The mosque is seen as an institution of excellence for Muslims in all aspects of life and not just focused on the field of worship alone. Mosques have historically contributed significantly to the Muslim community's glory. The mosque was used to impart revelation to the companions during the period of Rasulullah SAW. Discussions and debates as well as knowledge gatherings were intensified in mosques and became important educational institutions. The mosque is a symbol of the strength and integrity of the people throughout the ages. It is the most important institution because of its relevance to the question of human construction and development.

Today's era of modernization leads to technological intelligence in line with the development of IR 4.0 which led to the use of the internet in all fields, including formal education (educational institutions) and non -formal education (mosques and huts). Recently, the world was shocked by the COVID-19 pandemic which also hit the whole world. Malaysia is no exception so Malaysia has to implement the movement control order (PKP). The mosque institution also received its impact when the mosque was limited in the number of worshippers to perform worship there. So studies and lectures at the mosque usually also had to be postponed.

The mosque must always be creative in finding the best method to continue the efforts to deliver education to the community. One of the methods that can be implemented by the mosque is by giving studies online. This initiative can be carried out by the mosque by using social media platforms such as Facebook and the mosque's official Youtube. Synchronous studies are also implemented using google meet, zoom, teams and so on. This proactive action can resume studies among the mosque congregation.

Based on the background of the aforementioned research problem, the issue of how to give education in the mosque online arises, which requires a structured and systematic research study. Thus, in line with current developments and high technological advances in the community, the author believes that extensive research on the approach to delivering online education in the mosque is necessary to deliver online education in the mosque. The ideal technique may be introduced through this study and research so that the method of online learning in the mosque can be imparted to all levels of society, regardless of age or background.

Emphasis on the traditional and modern aspects of teaching can make the mosque a center of excellence in knowledge (Rahimi, 2007). The programs implemented in the mosque now must take into account current needs and developments. The method of delivery and the utilisation of information and communication technology, according to Azam & Huzaimah (2007), are two factors that must be considered. Education in the mosque is in line with

learning in Islam, which is lifelong learning. Modern equipment and the latest technology such as OHP, LCD, VCD, VHS and others are very much needed in preaching in the mosque.

As a result of the author's research and observations, the majority of previous research has focused on broad discussions about the mosque's role as an educational centre. Their writing is more theoretical by submitting various suggestions in improving the effectiveness of studies in mosques. However, the qualitative aspect of the study was not done to see the extent of the online study delivery methods made in the mosque.

### **The Implementation of Online Learning in the Mosque**

Based on the Systematic Literature Review above, there are two approaches that need to be applied in online study in mosques. Among them:

#### **Provision of Technology Media Equipment**

Online learning is a method of teaching and learning that uses current technology to improve education. The use of information technology in education should be emphasized in the delivery of current teaching and learning content. Learning can run using smartphones, tablets, personal computers and laptops. Online learning also uses electronic LAN, WAN or internet networks to deliver content, information and interact through it which facilitates its users. According to Rader & Wilhelm (2001), technological media can provide the desired information more systematically. Rosenberg (2001) also states that online learning conveys information and information easily.

One of the appropriate technology media to use is teaching through 'streaming video' to be implemented either live or recorded. The development and convenience of broadband networks, speed of internet access, and the supply of user-friendly audio and video equipment and software have made 'streaming video' media a practical solution for delivering learning content (Martindale, 2002). In addition, one of the learning mediums that can be used is YouTube (Tan & Carol 2013). Facebook is also a more suitable platform for improving the learning process.

Therefore, the mosque's management or the Religious Council that oversees a mosque must provide the adequate and best infrastructure to bring learning to life for the community even online. Strong internet facilities need to be provided to conduct online learning. Various mediums can be used such as google meet, zoom, Facebook lives, youtube live and so on in delivering studies to the community. This effort is very important, not only to prosper the mosque as a center of dissemination but also to make the community close to the mosque even though it is physically far away.

#### **Provision of Human Resource Equipment**

An excellent teacher needs to have high knowledge, expertise, skills and motivation to perform responsibilities, especially in the learning process. In this modern era, teachers are responsible for delivering learning content, generating an active and constructive learning environment, as well as encouraging students to submit questions and ideas. Therefore, teachers need to be smart to ensure that managed online learning becomes a meaningful

experience for students. According to Wiens et al., (2013), a quality teacher needs to provide support and motivation in cognitive, emotional and social to students, not just be a mere presenter of teaching content.

Among the important things that need to be implemented in the instructor is the initial preparation of teaching materials before implementing online learning. This process takes some time to prepare, in contrast to learning physically. Not only that, instructors should also improve their skills in information technology, pedagogy and online assessment.

Therefore, the council management and the State Religious Council need to supply instructors with high skills in delivering studies online. This is because online teaching has a different approach than physical teaching. It even requires high skills to attract listeners. Teaching in the conventional form will deprive the listener of following the learning in the mosque.

### **Conclusion**

Based on the systematic literature review that has been done, in conclusion, there are two identified online learning elements. Emphasis on online learning is given to online learning tools and quality in online learning aspects that are related to issues of COVID. These two aspects have been indicative of the existence of online learning elements in dealing with COVID. In general, COVID is viewed only as a problem of learning, whereas problems of lack of online learning tools and quality in online learning can also be categorized as a problem of online learning during COVID.

However, these two elements of online learning can be applied in online teaching in mosques. The management of the mosque and the State Religious Council need to play an important role in ensuring that teaching in the mosque continues even though the mosque is not open for public attendance in large quantities throughout the implementation of the MCO.

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