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Article

Managing Virtual Learning at Higher Education Institutions during Pandemic Covid-19 in the Indonesian Context

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Abstract

This paper discusses challenges and obstacles that teachers and students face in the application of virtual-based distance-learning process in Indonesian universities. The main focus of this study was on teachers' and students' readiness to face obstacles of virtual learning; and understand the preparedness and policy making by higher education ministry. A mixed method research paradigm was used to collect the data through questionnaires and response sheets from teachers and students from 20 Indonesian higher education institutions. A total of 250 respondents, 150 teachers and 100 students, participated in this research. For the purpose of analysis, the researchers calculated percentages based on the number of respondents for each of the option. Simple statistical procedures were used to compare the responses by both groups of respondents. The results showed that though there are intervention programs like 'independent campus' in most universities, but the teachers still lack learning support devices; secondly, there is no standard policy or a common virtual platform for virtual learning processes, thirdly, it is very difficult to assess seriousness level of students with regard to the online teaching material provided.

Keywords

Virtual learning • Covid-19 • obstacles • learning platforms • smartphones

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Introductıon

The COVID-19 pandemic has forced the entire world to wake up in a different reality. Its outbreak has affects all aspects of human activities globally ranging from education, research, sports, entertainment, transportation, worship, social gatherings/ interactions, economy, business, and politics. In order to curb its impact, health resources and provisions around the world have been stretched to the maximum to battle with this virus outbreak. The education sector remains one of the hardest hit by the outbreak (Onyema, 2020). The pandemic has become a big challenge to educational systems worldwide, though also seen as a catalyst to find new approaches and innovative solutions for learning organizations (Murphy, 2020). The switching over to distance learning through the use of e-learning and mobile learning technologies, and various virtual learning platforms has however minimized pandemics' impact on the education system, in general, and pedagogy in particular. The issue of distance learning has long been the focus of many experts and academicians and it is still an international issue (Terenko, 2020).

The pandemic has excessively affected the education systems across all levels, i.e. from preschools to tertiary education and higher education levels as well. In order to deal with the virus, it was imperative to shut down the educational institutions, to establish effective social distancing, and to commission all academic activities over to online communication methods, gadgets, devices and learning management systems. The shift to online teaching has been an enormous change for teachers and students as most of them were not trained to deal with the tools necessitated for the online mode of education (Chatziralli et. al, 2020; Jovic, 2018; Bae & Han, 2019; Maluleke & Dlamini, 2019; Casas-Rosal et al., 2019; Aras, 2019). The pandemic also led to a reduction in the workforce including in the academic sector as most transactions now take place online or work-from-home mode. Social distancing to prevent the spread of virus is being practiced ardently across all sectors (Setiawan & Iasha, 2020; Garidzirai et al., 2019; Altintas & Karaaslan, 2019; Fuentes-Azpiroz et al., 2019; Maluleke et al., 2019; Maciejczak, 2018). Teaching is also therefore continuing from a distance, except that a few practical courses such as medical, engineering etc. have been paused. This has also prevented the development of practical skills needed to succeed in these fields.

The transition to the online learning resources requires that teachers and students should have access to internet and other necessary hardware and software tools required for the online sessions. This has seriously created issues for teachers and students (Aliyyah et. al., 2020), since the transition to online mode has negated the very essential pedagogical feature of constant verbal communication, which is not possible in online resources. Therefore, it is important to devise new criteria and platforms for teacher- student interaction on online platforms. This will be a great contribution to pedagogical disciplinary studies. A few of these platforms include Microsoft Teams, Google Meet and Zoom webinar software system. For pedagogical courses, Zoom is the right choice as it provides audiovisual contacts for students (Almanthari, Maulina, & Bruce, 2020). Zoom may also be used for seminars to allow students to engage in discussions using their smartphones as an educational tool. It has been found that students feel more motivated to learn in such a teaching style and do not feel uncomfortable (Oztok et al., 2013).

The online lecture system has been assessed as a new challenge in the era of the Industrial Revolution 4.0, especially in the midst of the pandemic. Indonesia has officially issued a higher education policy called the Independent campus to meet the demands of the 4.0 industrial revolution (Abidah et al., 2020). This policy opens up a very large space for students to define their own learning areas, focus and interest. In addition, the new education policy also encourages students not only to study in the classroom but also in the community and involve a larger network (Hodges et al., 2020). Digital-based learning models have been maximized in a massive way almost all over Indonesia. These models have however not thoroughly reached the remotest social layers because a digital based learning model requires access to digital information (Abidah et al., 2020). It is

observed that not all students have the access to digital technology.

Online education is a familiar concept to teach with technology tools and platforms. Online education's success depends on factors such as good internet connection, learning software, digital skills, availability, and access to technology. Online education platforms are essential tools that support inclusive education and online learning. Online education is rooted in distance education. With the advent of digital technology that facilitates efficient and reliable delivery of lectures through virtual classrooms and other instructional activities over the internet, the meaning of distance education has changed. The high penetration of internet and mobile technology worldwide and numerous online education platforms have bridged the gaps in education, thereby reducing global illiteracy rates. Many new online education tools/platforms have emerged that facilitate online education, especially in times of outbreaks, such as the Covid-19 pandemic.

The big challenge for teachers and students is related to the use of learning technology that must be continuously improved. The online learning payloads still need to be continuously refined to be more interactive, allowing students to be more engaged in the learning process. Technology support also needs to be continuously improved, as currently facilities are provided by third parties, or service provider companies. Teachers must also be prepared to communicate with students through various channels of conversation such as WhatsApp, forum, telephone and video calls. They must continue to serve students in the middle of the pandemic without any compromise to quality of learning. Besides, there is also a need to develop institutional capacity of teachers and students for digital literacy (Sulasmi & Akrim, 2020).

The launching of 'independent campus' by Minister of National Education is a policy integrated with the policy of freedom of learning. This is characterized by a national education roadmap in order to be more directed. The Chairman of APTISI stated that the concept of freedom to study may be an old policy but the 'independent campus' is designed to provide more freedom and independence to all public and private colleges. The APTISI does not want to intervene with a policy that is not productive for the development of higher education (Crawford et.al., 2020). The new policy of 'independent campus' focuses on four main things: the opening of new courses, College accreditation system, State College of Law, and learning rights of three semesters outside the study program. These four policies, theoretically, have become the main issue built in the national education system. The National Education System Act has also defined five dimensions of college autonomy, namely 1) Applicable academic freedom and scientific autonomy; (2) Autonomy in managing its own institutions; (3) Obtaining the source of funding from the community and manage it based on public accountability; (4) Determining the policy of education management in its institution; and (5) Carrying out management under the principle of accountability, quality assurance, and transparency in evaluation.

The autonomy of education essentially means explaining that the college should be able to manage and determine its own needs and desires that are aimed at achieving the vision and mission of the College. Moreover, the autonomy of higher education is also one of the strategies so that it can meet the standards in which the college is in effect. However, the problem of this automation is the existence of private universities competing with public universities. The public universities are given the freedom to design and deliver regular programs in the manner they like. For this reason, they have become ivory towers for private universities. The autonomy of a college also leads to the college rivalry when they compete with each other in recruiting students. Private universities depend heavily on student volumes in support of their academic management, so they are much ahead in such rivalry games.

Indonesian universities face financial problems that are in no way inferior or less serious than those faced by higher education institutions in European countries (Allen et al., 2007). The colleges in European countries, where English is the first language, already have institutional

infrastructure and strong human resources. In contrast, the institutional and finances of Indonesian colleges is still far from satisfactory. The higher education budget in the years 2002 and 2003, for example, amounted to only around Rp. 4.3 to 5 trillion or about 0.3 to 0.4 percent of gross national product (GDP), much lower than other countries (Teo et al., 2013). The tuition fees available are getting smaller because the national policy is raising the higher education crude participation rate, which almost doubled in the last 5 years, from 8 percent to 15 percent on Propenas 2010-2014. The participation rate expansion policies bring a direct impact on higher education finances. The average cost per student has also decreased by 50 percent in less than 5 years. The finance of a college makes a huge influence on the management of universities. The results of research on universities in the United States show that the higher is the education funding in a college, the better is the performance of the College (Daeraii, 2001). This means that the education budget correlates positively to national education performance. The linkages between budget and educational performance also involve the political elements in it, especially for private universities, it becomes a major problem. The absence of a budget post, capable of meeting the operational needs of private universities, has not yet been maximized due to politics in education. Likewise, 20% of the education budget of private educational institutions secured by the Constitution 1945 has not yet been subjected to maximum of its application.

With regard to the freedom of student to study outside the course for 3 (three) semesters is also an integral part of university's autonomy. The essence of the college autonomy is that it should be able to acclimatize with its bending attitude in answering the needs of the labor market. It is required to correlate and partner with various institutions outside the institution (Foundation implementation of BHMN, n.d.). The partnership in question is to develop new courses or to evaluate existing courses. Therefore, this paper has been created to hopefully encourage other educational researchers to document and produce research evidence on how the current pandemic has transformed the work of education systems around the world. The proliferation of knowledge begins in educational institutions. Therefore, the education system, mostly higher education, must prioritize literacy for the world to deal with future viral outbreaks (Toquero, 2020).Departing from various issues in the previous discussion, this study became important to uncover the design of learning at a college in a Covid-19 pandemic situation.

This study was carried out with regard to the readiness of the university's management to respond to student needs and also the readiness of teachers to meet those needs through virtual methods. It also attempted to evaluate the ability of teachers in colleges and universities to operate online classes, and to inquire whether the teachers have the access to material and other tools for preparation of lectures. Finally, this study evaluated the success of the implementation of the learning process.

Methods

Overview

In the present study a mixed research approach with positive paradigm was used, where the main purpose was to evaluate the learning techniques and methods used by teachers in distance learning programs. The researcher designed a questionnaire based on previous studies on the phenomenon of distance learning in the pandemic and coping mechanisms adopted by teachers and students. Several studies like Chatziralli et. al. (2020), Mailizar, Almanthari, Maulina and Bruce (2020), Crawford et. al. (2020)have dealt with this theme that helped to formulate the present study was formulated.

Design

A mixed research design was used for this study comprising both qualitative and quantitative data collection methods. The research framework was mainly based on the system adopted by the Indonesian teachers to conduct online classes, and inquire whether they were able to

use the material required for preparation of lectures and how they evaluate the implementation of the online learning process. The data was collected from Indonesian educational institutions through questionnaires for qualitative information, and through a response sheet for the quantitative information. These questionnaires and response sheets aimed at finding how teachers and students evaluated the success of the online learning procedure and what difficulties they faced in the teaching and learning process.

Participants and Sampling

The participants of this study were divided into two separate groups:

- The first group comprised teachers from a total of 20 Indonesian educational institutions, colleges and universities. The heads of human resources of each institution was contacted for permission to collect data from the teachers in the study. The respondents were selected based on random sampling method and questionnaires on Google forms were sent to them. A total of 150 teachers participated in the study.
- The second group of respondents comprised students who were at the receiving end of online modules and learning programs. The head of each institution provided information about students. A similar random sampling approach was followed to select every second student in the list. The questionnaire was shared with student respondents through the Google forms. A total of 100 students participated in the study. The names of institutions, teachers and students were not disclosed in order to maintain confidentiality and transparency.

Data and Sources of Data

The data sources are the segments identified for a study from a given population to collects data. The primary data of this study was collected from teachers and students through a series of multiple response questions. The questions aimed at finding about their experience, satisfaction level, and difficulties they faced in adopting online procedures for teaching and learning.

Instruments

For the qualitative information, a research instrument comprising of multiple choice questions was sent to teachers and students to provide their feedback on the efficacy with which the distance learning was being operated in Indonesia. The researcher presented a cover letter with each questionnaire, inscribed instructions and details regarding the study, which facilitated each participant to complete the questionnaire without any difficulty.

As for the quantitative analysis, the researcher designed two separate response sheets for teachers and students. The response sheet for students evaluated the overall efficacy and understandability of the distance learning program whereas that of teachers focused on difficulties faced in the development of lectures and assessment.

This response sheets are given in the Table 1 and Table 2 below.

Table 1. Sample Response Sheet for teachers

Kindly Fill in the responses from 1-5 according to your observations about difficulty faced with operating the software and hardware (1=Highly Agreed, 2=Agreed, 3=Neutral, 4=Disagreed, 5=Highly Disagreed)					
1. I was given clear notice of the type of software to use for the online learning	**1**	**2**	**3**	**4**	**5**
2. I have had prior training in the operation of the software required for using a distance learning program	**1**	**2**	**3**	**4**	**5**
3. I am aware of the tools required for preparation of online lectures	**1**	**2**	**3**	**4**	**5**
4. I have prior experience of giving lectures online	**1**	**2**	**3**	**4**	**5**
5. I was able to maintain the interest of my pupil during the online sessions	**1**	**2**	**3**	**4**	**5**
6. I was given instructions and training by the institution on the software application for teaching	**1**	**2**	**3**	**4**	**5**
7. I was given instructions and training by the institution on the software	**1**	**2**	**3**	**4**	**5**

	application for modes of assessment					

Table 2. Sample Response Sheet for students

Kindly Fill in the responses from 1-5 according to your observations about your satisfaction with the online sessions (1=Highly Agreed, 2=Agreed, 3=Neutral, 4=Disagreed, 5=Highly Disagreed)						
1.	I attended all sessions on time	**1**	**2**	**3**	**4**	**5**
2.	The teacher was prepared with the lecture	**1**	**2**	**3**	**4**	**5**
3.	There was no difficulty in understanding the teacher with clarity	**1**	**2**	**3**	**4**	**5**
4.	I have access to a computer, mobile or laptop for attending the online classes	**1**	**2**	**3**	**4**	**5**
5.	The teacher was able to keep my interest and attention for the entire duration of the session	**1**	**2**	**3**	**4**	**5**
6.	I was able to comprehend the teachers clearly	**1**	**2**	**3**	**4**	**5**
7.	I was given instructions and training by the institute on the software application to be used for online classes	**1**	**2**	**3**	**4**	**5**

Data Analysis

For the purpose of analysis, the researchers calculated percentages based on the number of respondents for each of the option. Moreover, simple statistical procedures were used to compare the responses by both groups of respondents.

Results

The following table (Table 3) shows the results of the responses of teachers. The summary of the results can be seen in Figure 1.

Table 3. Response Sheet of teachers

Statement		**%**				
1.	I was given clear directions of the type of software to use for the online learning	**50**	**20**	**15**	**10**	**5**
2.	I have had prior training in the operation of the software required for using a distance learning program	**40**	**30**	**20**	**5**	**5**
3.	I am aware of the tools required for preparation of online lectures	**20**	**10**	**30**	**20**	**20**
4.	I have prior experience of giving lectures online	**60**	**20**	**10**	**5**	**5**
5.	I was able to maintain the interest of my pupil during the online sessions	**10**	**20**	**20**	**30**	**20**
6.	I was given instructions and training by the institution on the software application for teaching	**30**	**30**	**20**	**10**	**10**
7.	I was given instructions and training by the institution on the software application for modes of assessment	**50**	**20**	**10**	**10**	**10**

Table 3 and Figure 1 show that 50 percent of the teachers were not given any clear directions about the type of software application to be used for online classes. Almost 30 percent of the teachers were not provided any proper training and 40 percent had no prior training or experience in operating the tools and applications required for the distance learning programs and online classes. These results are understandable as most of the academic institutions used only the face to face delivery methods prior to the outbreak of the pandemic. These institutions were facing such a situation for the first time when they had to shift to online teaching methods. Therefore, most of the teachers were inexperienced and institution administrations were under prepared as well.

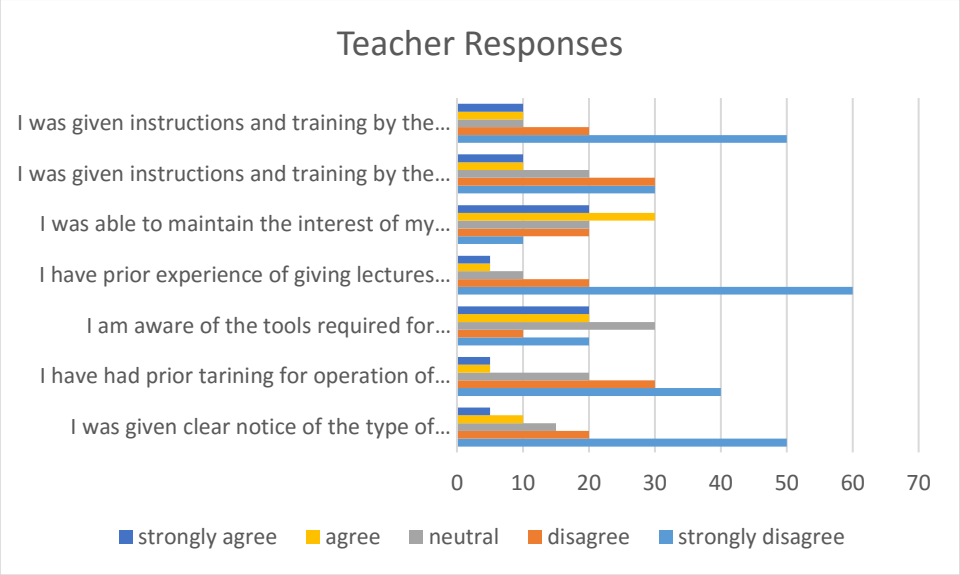

Figure 1. Teachers' point of view

Table 4 and Figure 2 present the responses of students showing their satisfaction level with online classes.

Table 4. Response Sheet of students

Statement	%				
1. I attended all sessions on time	**20**	**20**	**10**	**30**	**20**
2. The teacher was prepared with the lecture	**10**	**20**	**10**	**30**	**20**
3. There was no difficulty in understanding the teacher with clarity	**20**	**10**	**10**	**40**	**10**
4. I have access to a computer, mobile or laptop for attending the online classes	**20**	**10**	**0**	**40**	**20**
5. The teacher was able to keep my interest and attention for the entire duration of the session	**20**	**20**	**10**	**20**	**30**
6. I was able to comprehend the teachers clearly	**40**	**20**	**10**	**20**	**10**
7. I was given instructions and training by the institute on the software application to be used for online classes	**30**	**30**	**10**	**20**	**10**

The summary in Table 4 and Figure 2 show that like the teachers most of the students were not provided any information about the learning medium or the software to be used for classes. The students were informed independently by teachers and mostly different methods were used i.e. Skype, Zoom, Teams or recorded messages. The creativity of the teachers was however reflected in each of these modes as students stated that teachers were able to maintain the interest of the students in sessions. The results of the analysis also reveal that there was no prior decision regarding the choice of medium. There was also a lack of fixed regulations for assessment and attendance of students. A few students reported that they faced difficulties in understanding the teachers due to distorted networks. Thus, the results show that there is a need for further development and decision making for successful implementation of online classes in the pandemic situation in Indonesia.

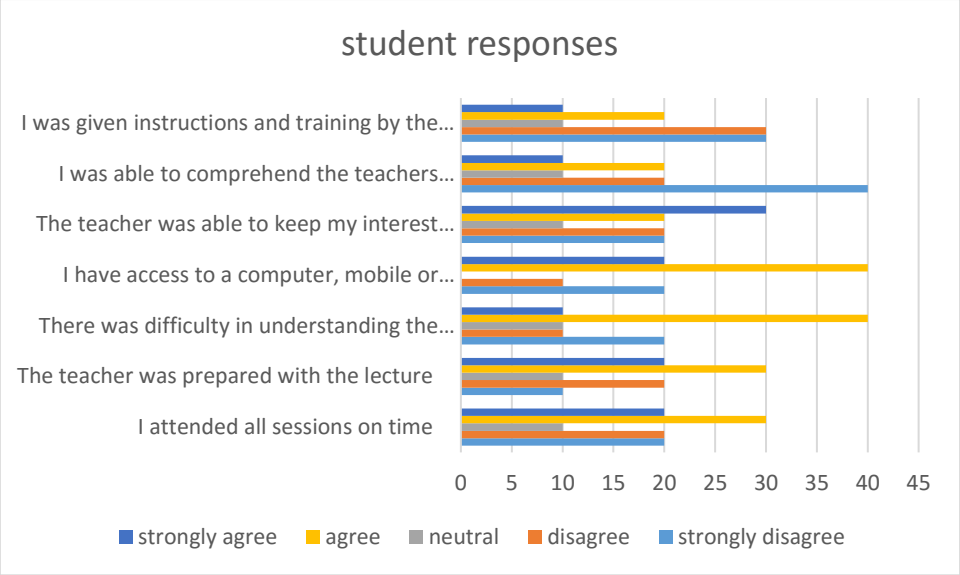

Figure 2. Students' perceptions

Discussion

The COVID-19 outbreak has forced millions of students to study from home. Learning from home has become a new phenomenon for students. According to Educational Task Force (2020), most students prefer to study in the comfort of their own homes because they tend to have everything without leaving their seats. However, receiving formal education from home can be challenging for many educators, learners, and parents, especially those in developing countries where accessibility, availability, and technology in education are not widespread. In addition to the cost of accessing online education, many other factors such as network problems, low electricity supply, disruption, poor digital skills, accessibility issues, and availability can also hinder the smooth learning from home.

A major issue of learning is using new technology and uneven access to it is a serious concern for many countries. Prolonged school closures can also deprive millions of students of access to education, especially those in third-world countries, rural areas, and people with special needs (Faizah et al., 2018). UNESCO understands these challenges, and made efforts to help educators and students in the affected countries to teach and learn online from their homes by providing free software and distance education facilities. Catherine (Iyer et al., 2020) reports that UNESCO is drawing up an online guide with links to distance learning apps and other resources to mitigate school closures' impact due to the COVID-19 pandemic. Students are expected to optimize the extra time they have due to mandatory school closures and improve their digital learning skills and acquire new learning habits at home. The challenges faced by COVID-19 can be transformed into opportunities by students to advance their problem-solving skills and digital capabilities.

During the pandemic, it is important to strengthen educational planning and adopt essential health measures in universities to enable teachers, students and rest of the stakeholders to continue with the teaching and learning processes while preventing the spread of virus simultaneously. These preventive measures can improve environmental hygiene and reduce the transmission of infectious diseases. Many countries have managed to slow the spread of the coronavirus taking drastic measures that include banning public gatherings and closing schools until further notice. Although school closures are an effective way to minimize the spread of the virus, it has come with its own challenges especially in developing countries such as Indonesia. Studying alone at home has proven to be highly ineffective as a learner may have many distractions at their disposal that can hinder learning and understanding. Many homes in developing countries do not provide an adequate

learning environment so students are therefore required to study either in their living room or bedroom which is highly ineffective as stated by the respondent (Owusu-Fordjour et al., 2020).

One of the benefits of the pandemic is to encourage online learning (online) teaching and learning methods. The Ministry of Education and Culture had always tried to work on a mechanism that will implement a synergetic information system for both teachers and students to work together (J.K. Mbwesa, 2017). In an effort to get students to study at home, MOEC had prepared a decade ago a number of support systems to smoothen the information process. They had even developed an android-based remote learning app: "Home Learning Portal" (Uline et al., 2010). Due to the outbreak of the pandemic, new features have been added to the portal. Students and teachers now can access all their learning resources, digital classes, virtual laboratories, and question banks through one single login. Learning centers have been expanded to include early childhood, elementary, junior high school, high school or vocational and college education(Wijaya & Vidianti, 2020).

Learning Facilities

The current research domain during Covid-19 pandemic is filled with studies trying to find out how universities should begin implementing virtual learning policies, using distance learning models (PJJ). National Education Minister Nadiem Makarim disclosed that learning from home or remote learning was on their agenda. They were trying to introduce a process of switching over to distance learning for all but that would have taken a transition time of five years. However, because of COVID-19 suddenly everyone needs to do it in a few months' time. Makarim also mentioned positive things that can be learnt from COVID-19 pandemic period, one of which is the optimum use of time that the teacher and parents should make to create a new learning method for the child (Detik.com, 2020). The implementation of this remote learning policy is facilitated by various platform, including Zoom Cloud meeting, Google Classroom, Google meets, and various other platforms as summarized in the chart below.

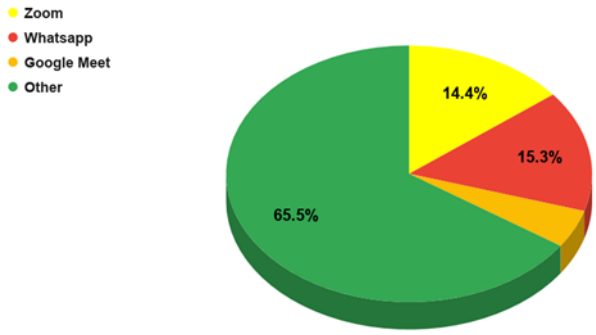

Figure 3. Online Platforms used during the pandemic

Figure 3 shows a variety of online platform used by teachers, as much as 65.5%, which comprise mostly customized learning management systems (LMSs) provided by respective colleges and universities. Specifically, around 14.4% used the Zoom Cloud Meeting application and 15.3% used WhatsApp. It was also evident from the findings that no college established any software application and made it mandatory for teachers as well as for students to use. This is clear evidence that remote learning or virtual-based learning model is still not ready for implementation.

This problem is a common phenomenon happening in all countries affected by Covid-19 such as Philippines, Malaysia, Ghana, Thailand, the United States, and many more. A majority of these countries are subjected to mandatory platform policy issues issued by their institutions (Owusu-Fordjour et al., 2020). In addition to platform issues, it was also found that faculty's ability to operate devices and applications and access to them also needed attention. Access to open

learning facilities can increase people's reach or access to data sources and information (Cercone, 2008) and there are provisions to establish such open learning facilities in the higher education system (SPTTJJ). As a result, the use of information and communication technology (ICT) in the learning process has increasingly become popular. The general profile of a student in SPTTJJ is that of an adult learner who needs access to data sources and information (J.K. Mbwesa, 2017).

Research studies have also found that online learning facilities in distance education prove more useful to improve first-year students' self-learning skills. Institutions also provide distance education study guides to students for mastering the distance learning model. There are also a few external factors that help students meet the needs of self-learning skills. According to H. Seker (2013), these factors include teachers' behavior, school rules, classroom environment, students' families, students themselves, teaching process, exams and evaluation process, and like. These factors affect students' attitudes towards the school in a significant way.

Figure 4 illustrates that a majority of teachers are skilled at operating the online devices and applications. This skills percentage can actually be used as the basis for universities to create a policy that is coherent with the majority of platforms. This can be achieved by creating an effective evaluation model and strengthen the virtual online learning process. A user friendly online learning model for both teaching and evaluation can accelerate the normalization process in this pandemic era.

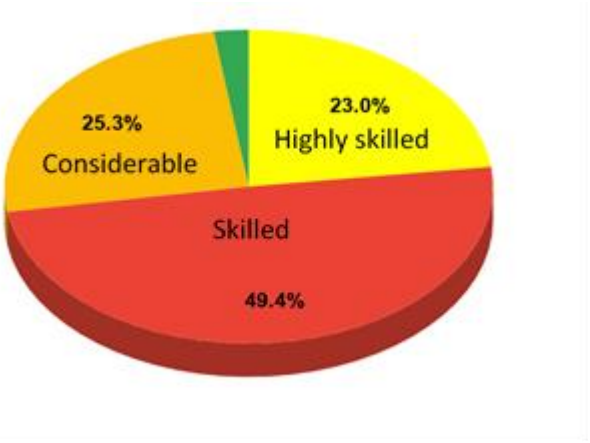

Figure 4. Teachers' Ability to operate online devices

A close analysis of the readiness of teachers and students in this distance learning model introduces various problems that interfere with and inhibit the smoothness of teaching. There are three main points to understand these challenges: first, the availability of hardware such as smartphones, laptops, electricity, and like; second, the availability of a strong user-friendly network; and third is the availability of free quota of high speed data packages in the audio/video modes (Hodges et al., 2020). The research results also revealed information about some campuses in Indonesia that facilitated students with the provision of Internet quota through cooperation with various service providers in the region, such as the University of Muhammadiyah Yogyakarta (UMY), Diponegoro University (UNDIP) and the University of Dian Nuswantoro Semarang (Udinus). UMY provides assistance to all active students for three months from March to May 2020 of Rp 150,000 per month. Teachers are provided free WIFI facilities from the campus, but since teaching is mostly done from home and not all teachers teach from colleges or their work places, it is not known whether teachers are also given free quota facilities from the college.

Regarding implementation of readiness to practice ICT-based learning, especially e-learning as an alternative, the university needs to conduct a factor analysis that can be used as a benchmark for success in preparing e-learning (Iyer et al., 2020). The implementation of e-learning-based learning can run properly to drive distance learning through e-learning provided an institution has:

(1) institutional standards (2) HR standards (teacher only); and (3) HR standards (administrator-only) that can be used as an assessment of readiness and seriousness of the site in carrying out remote teaching programs (Lawrence-Brown, 2004).

Learning process

The findings reveal that teachers prepare everything related to the learning process such as good planning, providing complete information, anticipating any obstacles, and contingency planning for alternative timings and learning applications. Data shows that 86% of teachers provide a good introduction at the initial stage describing the learning process to the students by providing complete information. The information pertains to lecture mechanism, teachers' and students' roles (Hodges et al., 2020). A good number of teachers also anticipate various obstacles that may occur in distance learning process. They conduct a need analysis study to identify challenges and obstacles that students might face through sharing and discussion before beginning of each academic session. These obstacles include problems related to availability of devices, networks and quota, and understanding the mechanism of a test or an assignment.

Teachers in this pandemic also look for such teaching material and techniques that could provide students adequate learning. They design teaching material by referring to resources easily accessible to students such as Google Scholar, YouTube, and other online material. However, it is difficult to determine whether students were making a serious use of this material. The research revealed that this was the biggest weakness of this learning process that teachers could not control students' seriousness in attending online classes. Figure 5 clearly shows.

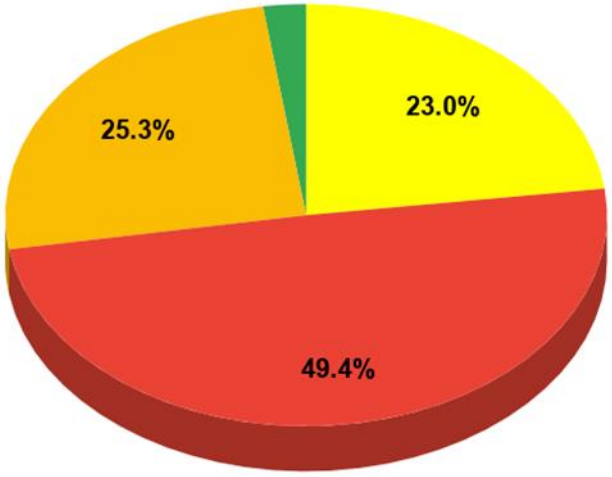

Figure 5. Manage online learning

Distance learning or virtual learning process is based on what can be called a 'concept' but the difficulty faced is in the 'method' especially for students living in remote areas. There cannot be full online learning through any method that can help students show their practical ability or the output in optimum. Nevertheless, teachers felt it easy and comfortable to conduct virtual distance learning classes. A major benefit that they felt in this online learning process was the ease of access to information through a smartphone device from anywhere at any time. This ease of access also gave students the opportunity to communicate directly to teachers if found obstacles in understanding the teaching material provided.

A few studies have analyzed virtual-based remote learning problems (Hodges et al., 2020). Their results show that teachers have not made adequate development and adjustments with current conditions, which has resulted in a high saturation level of students (Iyer et al., 2020). However, even in face-to-face teaching students could not focus on teacher's explanation, and so do they fail

in virtual model too (Maria, 2013). Hence, both teachers and students need to do improvisation and develop and design teaching material relevant to the current situation.

The issue of designing and developing of teaching material has been taken up in many studies. A few have offered suggestions like making a digital training module with the help of various concept software like iDu, material so that students' learning quality can be improved. Likewise, the problem of making students active in learning sessions can be improved by using the Rinfo Group mailing list. Similarly, software like iMe will make students' mindset more creative, innovative, and develop critical thinking. All these measures have been taken up in implementing the 'independent campus' program recently introduced by the Indonesian Ministry of Education. Such interventions in the past also have been useful in improving the quality of learning process, improving the teachers' professionalism, and creation of a good learning environment (Oztok et al., 2013). In the current situation too, such a program like 'independent campus' shall increase community participation and students' engagement. The teachers shall also be benefitted by the training programs, helping them to understand better the online mechanisms and technical teaching such as designing learning aids in the form of videos, PowerPoint, and so on. All these interventions aim to overcome constraints faced by teachers and students in online learning.

Conclusion

This study highlighted various issues, problems, and obstacles related to virtual learning process. It is concluded that virtual learning in universities has a paradigm known as 'independent campus' which is a good initiative to cope up with the obstacles of virtual learning. In the midst of the Covid-19 pandemic, universities are facing three major obstacles: first is the non-availability of devices and gadgets like hardware and software in adequate number. Secondly, the virtual learning process does not have a standard teaching and learning model of each college. Thirdly, the most dominant obstacle is the difficulty faced by teachers in determining the readiness and seriousness level of students during the entire learning process. These constraints have been discussed and analyzed in past researchers under different circumstances. During the Coivid-19 era, it is rather more difficult as no campus has yet been able to establish a robust platform for virtual learning.

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