

Lecturers' attitudes and perceptions of using Technology during COVID-19 pandemic: Literature Review

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Abstract: The research aims to provide knowledge about the recognition and use of faculty technologies for education lectures are responsible for developing moral character. Preliminary results were gathered from a survey offered to 182 departments of four universities. The researcher used a definition and interpretation approach for quantitative and qualitative use in this study. There were 530 lectures of 25-50 years of age (men and women). A study was conducted based on Kohlberg's theory's concept of gender identity. Findings show that technology is mostly optimistic and that universities and colleges do not have adequate technological assistance (both hardware and training). The most popular forms of technologies are the course management, laptop and web applications. The data show that, intermediately or marginally below, the departments as a whole operates in the accepting/use spectrum of technology.

Keywords: lecturers, perceptions, technology

Introduction

By a lethal coronavirus, which claimed millions of lives, the whole planet was brought to its knees. We don't know how COVID-19 will go next. It is obviously a major problem for both health care providers and policymakers around the world, in particular. But we should be sure that COVID-19 will keep spreading and causing disturbances, and even if it is detected and COVID-19 resolves, the next epidemic or pandemic will be likely to hit the planet. In the intervening years, a host of European countries have either partially or completely locked themselves down after the total number (for example, Italy, Spain, the UK, France, Germany and the United States). Education has freshly made a transfer point in the Higher Education part and forced a higher grade in Education

Technology (EdTech) Innovation competition amongst Universities (Douglass & Shaikh, 2004). Though this occurs elsewhere, Africa has also been infected and the virus has not escaped Zambia. Additionally, states worldwide have shut down schools, colleges and universities, since COVID-19 is alarmingly circulating and murdering people (Protta. C, 2021). Many of these steps to combat and suppress the outbreak of COVID-19 have been implemented (Piattoeva, N., & Gurova, G. , 2021). On the other hand, the epidemic of COVID-19 was a changing game of pedagogy around the world. In Indonesia and the whole nation, universities and colleges have worked hard to quickly shift their classes online. Online learning was also an overwhelming reaction to these

closures (García Rodríguez, C. C., Mosquera Dussán, O. L., Guzmán Pérez, D., Zamudio Palacios, J. E., & García Torres, J. A, 2021). This is a way to combat the transmission of a transmissible virus such as COVID-19, (Syzdykova, Z., Koblandin, K., Mikhaylova, N., & Akinina, O, 2021).

In order to integrate information technology and mathematics curricula, though, we must understand how to use information technology as appropriate educational means for the teaching in a classroom. (Culp, K. M., Honey, M., & Mandinach, E, 2005) The use of information technology has become a significant field for international and local education, (Feille, K., Wildes, A., Pyle, J., & Marshall, J., 2021). Our research idea is to compare similarities and discrepancies in IT management of Muhammadiyah Universities and other countries within a fair context and then discuss ways to adapt information technology to Muhammadiyah University's high school education books.(Hodson, D, 2021).

This study stressed the literature contribution that education is the best answer for online or digital learning in the age of the global pandemic (Gourlay, L, 2021). This research acknowledges the potential of online learning during the COVID-19 period while also having the impression of individuality. After all the educational institutions were prematurely closed from 15th March 2021, the process of learning about a pandemic of the global pandemic at Muhammadiyah University in South Sulawesi came to a higher education stop. Both higher education institutions in Indonesia have been called upon to turn to online learning.

The application of technology in the course was a tool for the use and the use

based on the usefulness and ease of use perceived (Ahmed, Z., Nathaniel, S. P., & Shahbaz, M., 2021). Few professors, teachers, universities and colleges lead the way to acceptance of technology, and some went slowly. It was not also an operation for individuals or organizations (Arkoful, V., Barfi, K. A., & Aboagye, I. K., 2021). Many university projects explored a number of interrelated causes in terms of the sluggish speed of technological advancements in education (Jafari-Sadeghi, V., Garcia-Perez, A., Candelo, E., & Couturier, J., 2021). The reasons are lack of technology training, technology behaviors, lack of training and technology support, shortage of infrastructure and the scarcity of high-tech classrooms, (Kajander, A).

Research Methodology

The research applied a qualitative design to investigate the problems of science. The research approach is the design of the qualitative method. Using purposeful sampling techniques, prospective online learning of lectures at Muhammadiyah University of Enrekang, Muhammadiyah University of Makassar, Muhammadiyah University of Sidenreng Rappang and Muhammadiyah University of Parepare were sampled. The exhibition sample was composed of 535 participants from 182 departments in 2021. In the framework of social media apps, the authors managed an adjusted and validated scale to quantify the online conduct of participants by online learning as follows. Participants also answered questions about their ethnicity, year of teaching, area of specialization, level of teaching, and gadgets they own, such as a desktop, laptop, smartphone, and so on. There are 42-item to survey after a study of the literature to capture faculty members' behaviors and expectations about technology usage in the classroom. Part A of the survey contained

25 Likert Type scale elements about teaching and studying, technical assistance, and online courses (Bondarenko, T. G., Maksimova, T. P., & Zhdanova, O. A, 2021). Faculty members were given a 5-point scale to respond to the things (1=strongly disagree, 5=strongly agree).

Discussions

Reliability analyzes (training and learning, online classes, and technological support) and a global scale of faculty attitudes and expectations on technology usage in classrooms were performed for the purpose of assessing the internal continuity between all subjects. The elements that compose the subscales were omitted from

Part B consisted of 18 questions that called for percentages of students who used a particular technology platform in the classroom. 0 percent, 25 percent, 50 percent, 75 percent, and 100 percent were the percentages listed.

the scale with low correlation. Accordingly, there were 10 items in training and learning subscale ($\alpha = 1.54$), 12 items in the technological assistance package ($\alpha = 1.40$), and 14 items in the online classes subscale ($\alpha = 1.56$). Cronbach's total scale alpha coefficient was stated as .1.5, suggesting an

acceptable internal consistency. The reliability analyzes are summarized in Table 2 below.

Subscale	Cronbach's
Training and Learning	1.54
The technological assistance	1.40
The online classes	1.56

In order to summarize views and expectations of how technology is impacting education and learning, a descriptive statistics have been used. The results of Table 2 show that teachers at both colleges have an effect on their students' learning and teamwork viewed using

technology in the classroom. The notebooks (M = 6.78, SD = 2.80) and smartphones (M = 6.54, SD= 2.76) therefore are supported by this approach. According to colleges, it takes more time than conventional approaches to teach using technology in Table 3.

Components during Covid-19 pandemic		M (SD)
The use of technology in google classroom by the department has an impact on instruction.	9.0 (2.18)	
The use of technology in a curriculum affects instruction.	8.46 (2.38)	
Technology enhances the cooperation of lectures in universities	8.0 (2.18)	
For education/learning purposes I allow smartphones to be used in my curriculum.	6.34 (2.76)	
I promote the use for online learning of laptops in my class	6.78 (2.80)	

Table 3. Lectures' perceptions of the use of technology to teach and to learn

The online classes

As regards technological assistance, including hardware and applications, the findings show that universities and colleges appear to continue to support the institution. The department also appears to accept that the university has a marginally greater number of training technology workshops (M = 3.82, SD = 2.5) than the schools (M = 3.34, SD = 2.56). The professors of the IT aid desk (M = 4.58, SD = 1.16) come first while looking for aid and then college (M = 7.46, SD = 2.24). The data reveal that a professional support unit for the educational use of technology wants more departments (5.38). It also shows that technology is seen by the department as helping professionals. Table 4 displays the approaches and standard deviations for professional assistance perceptions as follows.

Components	M (SD)
Workshops on instructional technologies are offered by Muhammadiyah Universities.	3.82 (2.5)
Muhammadiyah Universities provides hardware and software.	5.6 (2.54)
Workshops on instructional technologies are available at my college.	3.34 (2.56)

Hardware and software are purchased by my college.	6.14 (2.74)
Some employees in the department will support me with technologies.	7.46 (2.24)
I'm looking for assistance with technology from the Office of Technology Services.	7.58 (2.32)

The findings in the segment on online courses showed variations in faculty views that learning outcomes are the same for online and face-to-face courses ($M = 5.46$, $SD = 3.16$). The same tends to be true in the consistency of online and face-to-face courses ($M = 5.82$, $SD = 2.82$). For an online course, a vast majority of professors believe that department student engagement is critical. According to the results, marginally more faculty have taught online courses than have taken one ($M = 7.74$, $SD = 3.24$). Lecturers believe that teaching styles used in online classrooms are the same as those used in face-to-face courses ($M = 5.46$, $SD = 2.74$), but this is not the case. Table 5 shows the means and standard deviations for professors' impressions of online classes.

ECAR's survey series offered in-depth reviews of technological patterns, problems, classroom use, assistance, and other topics relating to educational technology (Xiang, W. C., Wang, M. L., Cai, Y. B., & Zhou, D. C, 2021). Throughout their series of reports, they looked at IT use and patterns in great detail, (Zhou, C, 2021). The results of this research were more cursory and exploratory, showing that the university is not behind other schools in terms of technologies and that the faculty as a whole is running at the intermediate stage or just below.

The technologies used at this university are similar to those described in the ECAR studies. Course management systems, smartphone applications, demonstration apps, Websites, collaboration tools, videos, multimedia tutorials, and recorded lectures are among the top eight (Kurniawan, A. R, 2021). The majority of these are identified by faculty in the ECAR 2021 during the covid-19 pandemic of departments report as those they claim they would be more successful using for teaching if they had better skills in Muhammadiyah universities (McAdam, M., Miller, K., & McAdam, R, 2021). Faculty in this study shared a preference for a professional support unit devoted to instructional use, which is in line with this feeling, (McMahon, D., Hirschfelder, K., Sheridan-Stiefel, K., Henninger, E., & Buchanan, 2021).

Departmental variations in mobile phone usage as a learning instrument and the use of gaming in training are similar problems observed in both the ECAR studies and this report, (Zhu, X., Xiong, Z., Zheng, T., Li, L., Zhang, L., & Yang, F, 2021). Another common problem is the increased amount of time taken for planning by using technologies. In the fields that IT supports and preparation, there are similar threads (Morze, N. V., Smyrnova-Trybulska, E., & Glazunova, O., 2021). According to the

ECARs 2021 Departments report, departments request assistance from the IT help desk first, then from themselves, web searches, and finally from peers. Faculty in this study also requested assistance from IT first, accompanied by colleagues.

The use of technology at Muhammadiyah universities in South Sulawesi is in line with faculty views on a national and international basis. Although the Department agrees that using technology in the classroom helps students understand, further support for incorporating technology into teaching is needed (Perrotta, C, 2021). This study's results would be used to reinforce the need for further support in studying emerging technology and incorporating them into the classroom. More professors from other colleges could be recruited for future study, and gaps between colleges could be investigated.

The advent of information technology had an effect on the educational environment, especially during the learning process. The learning process has five changes as a result of the increased use of technology: from instruction to performance, from classrooms everywhere and anywhere, from print to "internet" or on the channels, from physical to network facilities, and from time to time. From a technological standpoint, this information technology is an IT application subsystem. '3RQ212; 3RQ213' were the codes allocated to the participants in the study. Students involved in the study were coded as '3RQ212; 3RQ213; 3RQ214; 3RQ215; 3RQ216; 3RQ217; 3RQ218,' while the assistant was coded as '3RQ212-18.'

CONCLUSION

The COVID-19 pandemic raised major concerns among students, especially in South Sulawesi, Indonesia. Based on the results of the report, the students were aware of the COVID-19 pandemic and were well aware of this global issue, even though numerous differences still existed. Students knew the transmission of the virus, its effects and the necessary precautionary steps by individuals and the wider community. They also supposed the Mass monitoring and improved community quarantine must be carried out in the local community. In view of the advice of WHO, students follow the concept of the COVID-19 vaccine even though a significant proportion of students demonstrated their lack of confidence. In school, students were reticent to use Alquran and Hadeist learning to adopt a mixed-learning method online because of technical and financial constraints. During this COVID-19 pandemic, students were responsive and happy with the government's efforts to reduce infection spread.

While students are more anxious about COVID-19 infection, sufficient evidence still exists that students from two local colleges in South Sulawesi practice measures to cope with anxiety during the challenge to world education safety. More importantly, though the paradigm shift for pedagogical education is still being adopted in Indonesia, schools should start training pupils and teachers on the application of online learning and improve the resources and skills of both teachers and students for information and communication technology (ICT).

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