

Proceeding Paper

Online Learning with Digital Technology and Computer Software: New Experiences for Indonesian Students in Education Institutions [†]

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Abstract: The experiences of students in the online lectures of Binus University, Indonesia, were analyzed using a qualitative descriptive approach. Offline and online interviews were conducted for data collection. Interviewed students had different backgrounds and experiences studying online. The perspective of the distance learning program was explored using the Binus Online (BOL) class method. Obstacles were determined for students and lecturers as students did not complete their assignments because they were busy with their work.

Keywords: Indonesian students; higher education institution; Binus online employee class

1. Introduction

The development of information and communication technology, such as Android and Zoom, is advanced in the areas of life regarding the economy, society, and culture, which makes education adapt and integrate with technology [1–3]. Employees with limited time are helped by these technological advances as there is no need for them to leave their job to obtain a bachelor's degree. Technology is needed in education, so the government permitted universities to open online lectures after the COVID-19 pandemic in early 2020. The educational process is changing to online learning with the help of communication and information technology [4]. The results of this study showed that the educational process is a new model with conveniences but also with challenges, shortcomings, and obstacles.

The aspects of online learning with new digital technology have not been studied extensively yet. Previous researchers viewed technology linearly, especially the implications of technology in online education. Fundamental issues in the relationship between technology and student status have not been researched yet. Previous research showed three trends in which the difficulty and unpreparedness of using applications [5] and satisfaction with learning experiences were analyzed [6]. Educational technology is analyzed from the perspective of enriching skills and knowledge [6,7]. Technology helps students learn and plays an influential role for teachers to enrich teaching abilities, improve product quality, and make the learning process more effective in an argumentative culture [8–10].

This study aims to complement the shortcomings of previous studies which did not analyze how lecturers control the academic process with new technology. The perceptions of students and lecturers about technology and lectures need to be analyzed because student employees find it more difficult to follow lectures. In line with this, we need to study how to adopt technology for online lecture learning, the challenges for students in their ability to adopt online lecture technology, and lecturers' complaints and difficulties that influence the online class method. The result of this study provides a basis for policy formulation and social engineering in achieving the goals of implementing online class technology. This study was conducted to determine the role of online learning with digital



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technology for employee students as they have different situations from regular students and the use of technology is a mandatory prerequisite in the online class model.

2. Method

This research was conducted using a qualitative descriptive method to reveal students' experiences in online class learning. Students from Binus University in Jakarta, Indonesia, were invited to participate in the research. This college was chosen because it has good distance-learning programs in various regions. The majority of students were company employees who had limited time to study. They depended on the flexibility of the study time, either in the afternoon after work or on weekends. The students had various backgrounds. Apart from students, lecturers were also invited. Students' experiences were collected using offline interviews via WhatsApp as face-to-face interviews were not possible. The majority of students were working, so lecturers also used WhatsApp for teaching. Data were also collected through observations of the learning process. The role and assistance of lecturers for their students were also observed and recorded.

The data collected was analyzed according to the stages of qualitative descriptive research, including data reduction and presentation [4,11,12]. Data reduction was carried out by selecting and sorting available data and excluding data that were not relevant.

3. Result

3.1. Student's Experiences in Online Lecturing

Students' experiences in online lectures have changed the culture of lectures. Face-to-face classes are no longer mandatory at various institutions in Indonesia, and digital-based learning has been introduced. This shift can be a challenge for universities and students who have a low level of technological literacy. Online lectures are flexible and fun, but seriousness is demanded. The data on students' experiences in online learning are presented in Table 1.

Table 1. Students' experiences in online lecturing.

No	Experience	Code
1	"While taking online lectures, there are many learning resources available on the Internet (articles, electronic books, journals) that I can study, apart from that I am flexible in submitting assignments and taking exams. My sad experience is that I don't socialize enough with my fellow students because they are busy, especially students who are working".	Technological legality
2	"The ups and downs may be greater when doing group assignments. When you get a member who has a large contribution, it's quite good, if you get a member who is easily lost and doesn't have a contribution, it's not good".	Loss of communication
3	"Time is flexible, lecturers understand students' busy schedules, so grades are usually balanced".	Flexibility
4	"The sad thing is that sometimes there is a lot of material that you don't understand and it's difficult to ask questions from lecturers or fellow students. The good thing is that it's very flexible and can be done anywhere the lecture takes place".	Flexibility
5	"Online lectures make us have a lot of time, because the lecture hours are flexible and we are not required to attend lectures in person. The sadness is that socialization is lacking, because there is no direct interaction with lecture friends".	Loss of learning enthusiasm
6	"Actually, online lectures are very difficult, we are required to always be independent, especially when there is a vicon schedule, sometimes I forget".	Loss of discipline
7	"With online lectures, we, students who attend lectures, can work while paying for tuition fees. The sadness is that study hours clash with work".	Not conducive
8	"If you have a zoom meeting while you're still in the office, you will be less focused and you won't be able to optimally understand the lecture topic".	Loss of enthusiasm
9	"The sadness, not being able to meet face to face with classmates, feeling like studying alone even though you have friends".	Loss of enthusiasm
10	"I don't make many friends because they have their own busy lives".	Loss of enthusiasm

3.2. Challenge in Online Lecturing

The change in the learning system demands student independence for their success. This provides obstacles and difficulties. Students are required to be clever in managing their time because they also have obligations as employees. Apart from having to attend online lectures, they have assignments from lecturers on the Binusmaya application for personal and group assignments. They are required to join forums every week. As a result of the online learning system, students encountered many difficulties, as shown in Table 2.

Table 2. Challenges in online lecturing.

No	Challenge Online Lecturing	Code
1	"The challenge of time management is something we always face, where as office workers we also have to complete office work on time and then work on campus assignments so that they are completed on time".	Having limitations
2	"My challenges are in expanding relationships or during group work".	Having limitations
3	"First, from within me, a feeling of laziness and poor management. Second, external factors, such as the material presented is not of high quality, a group of friends who are lazy/not united, network connections that are sometimes slow".	Note professional
4	"The challenge during online lectures is that we are required to be smart in dividing our time between studying and work".	Having limitations
5	"When studying online there were questions that I didn't know, I was confused about what to do, because I'm the type of child who rarely wants to ask my friends".	Having limitations
6	"The challenge faced in online lectures is that we are required to explore more of the subjects we are studying because the number of meetings with lecturers is very limited".	Having limitations
7	"Feeling like you don't need college and sometimes taking it for granted. There needs to be a strong desire and awareness to undertake this online lecture".	Note professional
8	"I study while working. When you have a lot of assignments at college and at work, it is quite a big challenge".	Having limitations
9	"Studying after coming home from work, where you are physically and mentally tired but still have to continue studying at night. The vicon who followed while on the way, was not very concerned about hearing the lecturer, especially if the connection was unstable on the road".	Having limitations
10	"As an office worker, you also have to complete office work on time and then work on campus assignments so that they are completed on time".	having limitations
11	"The biggest challenge in online lectures is taking classes via Zoom while working. Focus will be a big problem in this case and will have an impact on the material presented. Apart from that, group assignments are a challenge because not everyone has the same time to complete the assignments that have been distributed which results in the submission of assignments having to be close to the deadline".	Note professional

At the same time, the students in this program were also required to have an understanding of each subject. JNT said, "I study while working. When you have a lot of assignments at college and work, it's quite a big challenge". AS said, "Studying after work, when you are physically and mentally tired but still have to continue studying at night. The vicon who followed while on the way, was not very attentive to hearing the lecturer, especially if the connection was unstable on the road".

The demand for learning various subjects was a burden for students. They could not follow the lessons, which made them feel depressed and hesitant to do their assignments. When there was a group assignment, they learned together with group friends. For exams, they answered questions that did not match the meaning of the questions. In other words, the role of lecturers was still necessary (Table 3).

Table 3. Obstacles of student.

No	Lecturers' Experiences as Online Learning Companions	Code
1	"The lack of communication between lecturers and students makes lecturers worried that their students will not understand what is being said".	Quality
2	"Usually, when answering questions, many students do not include more references".	Not professional
3	"Students do not turn on cameras during lectures. Several are angry because students do not answer the questions before answering. They seem to answer carelessly".	Not conducive
4	"During the video conference session, some students were unable to activate the camera because they were still at work".	Not professional
5	"Many students are not committed to the assignments they have been, so students often miss the assignment deadlines given by the lecturer".	Not professional
6	"Maybe more frequent connection problems".	Not conducive
7	"The lecturer doesn't interact much during class and doesn't even turn on the camera".	Not conducive
8	"Several students submit assignments incorrectly to the LMS and do not submit assignments on time".	Not professional
9	"There are many students who are traveling".	Not professional

3.3. Lecturers' Experiences as Online Learning Companions

An obstacle faced by lecturers is their inability to control students so that they can be focused on studying. Online lectures made it easy for employees to continue their studies, which resulted in the obstacles shown in Table 3.

The lecturers hoped to control class conditions during classes and the campus provides mandatory rules for turning on the camera. Even though lecturers often apply discipline, several students actively attend classes. Students sometimes logged in without turning on the camera. Several students were busy playing games without paying attention to the lecturer. These were challenges for lecturers to find effective online learning methods.

These were stated by a lecturer as follows: "Several obstacles when teaching online: Lecturers cannot control the class as a whole as during face to face lectures, Lecturers do not know whether students' attention is focused on the lecture, Lectures are often interrupted by an internet connection that is sometimes not good". Another obstacle is students' seriousness during lectures via video conference. When lecturers send lectures via the Zoom application, many are late for various reasons, either because they are still working or because they are on their way home. This complaint is similar to what US lecturers complained about: "During online learning, students are less focused on following the material. Even though they are asked to be on camera, they will only activate the camera for a maximum of 5 min after it is closed again. Apart from that, because the interaction is not direct, there is less nuance compared to face-to-face meetings".

This makes lecturers unable to control, direct, and condition students [13]. This obstacle is the one faced by lecturers mostly. Many lecturers felt the same without being able to provide optimal action to ensure better online learning conditions.

4. Conclusions

The results of this research showed that online lectures are technically complex for employee class students, which reduces the essence of understanding the learning topics. Lectures are offered through video conference, which requires students to access the information autonomously. As a result, the learning objectives were achieved less than the lecturers had expected. New technologies in education need students to have technological literacy by accessing material and explanations independently, even with obstacles. This research was conducted from the perspective of lecturers and students of Binus University. Thus, a complete and broad picture of learning cannot be provided. Therefore, it is necessary to involve more research objects to collect more data on technology-based education.

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