

Alternative Strategy for Teaching and Learning during COVID-19 pandemic – A case study from Middle East College, OMAN

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Abstract

Education witnessed great evolution thanks to Technological advances (Raja and Nagasubramani 2018). Although Online learning has many benefits such as flexibility and scalability, many higher education institutions do not opt to it since it was considered less effective than traditional classrooms. The outbreak of COVID- 19 pandemic and Social distancing measures taken in most countries in the world have revived the need for Online learning and greatly impacted the educational landscape.

In this research, we target to study the effectiveness of online teaching through a case study from Middle East College during Spring 2020 semester. A layered approach has been adopted in the form of methodology which could be further elaborated and customized as per the nature and level of module. To this end, assessment of online teaching implementation from both teacher's point of view and student's perspective have been accomplished. Challenges will then be analyzed and recommendations in the future will be suggested.

Keywords: *Teaching pedagogies, Education technology, Online learning, COVID-19.*

1. Introduction

In Spring 2020 and Summer 202, Educational institutions across the world have shifted from face-to-face to distance learning. This change has led to major reforms in Assessments and the learning environment using teaching/learning activities (Montenegro-Rueda et al., 2021). In Middle East College, an alternate assessment approach for assessments has been designed and implemented. This approach mandated that for each module, a maximum of two assessments must be scheduled and that these assessments must be online. The Academic Affairs Committee has undertaken a very detailed review of the online assessment.

Designing assessments is undoubtedly a crucial aspect of the educational process, and they must be closely related to the material being taught. Non-face-to-face

evaluation is a significant barrier to finishing the academic year, even though online teaching was already a difficulty, and frequently a shock, for the university community. Numerous variables, including people's innate resistance to change and the technical constraints of systems designed to give specific computer support for tasks that are mostly face-to-face, play a role in this (Panke, 2017).

The assessment of online teaching is accomplished from two perspectives: teacher's point of view and student's perception of online learning. The different aspects that will be evaluated by the teacher cover the redesign of Learning Management System(LMS), Student interaction and the use of technology to support the distance learning. In order to evaluate the student's perception of online learning, a questionnaire has been conducted and shared with students from different modules.

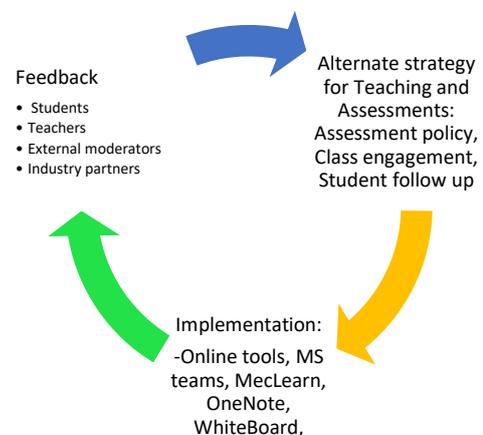


Figure 1: Methodology

2. Alternate teaching and learning practices

Course configuration on the LMS

Before Spring 2020 semester, Blended learning was adopted in the modules handled by the module leader by combining e-learning techniques to on-campus classes. Moodle was configured in a way that supports flipped teaching by providing different types of

resources that meet the needs of individual learners and stimulate active learning.

At the beginning of Spring 2020 which coincided with the spread of COVID-19 pandemic, measures have been taken by Omani government for social distancing and on-campus class suspension. Middle East College reacted immediately to changes by adopting online learning for the delivery of all its programs and provided the adequate framework, staff development and review of policies to ensure its successful implementation.

In order to ensure the effectiveness of the new learning environment, we started by re-adjusting the content of the learning Management System to increase the level of student motivation and engagement and compensate the role of the motivational role of the teacher during the face-to-face classes.

The weekly content was organized in a way that an enrolled student must first view the flipped resources, then he/she can access to the voice over ppt presentation then he/she can attempt the quiz or upload the answers for one assigned activity. If the score acquired in the quiz/activity is greater than the fixed threshold, a certificate of completion will be accessible for downloading.

By implementing this technique, the number of students who are accessing to Moodle content and attempting the activities/quizzes increased significantly according to the analysis of Moodle Access reports.

Additionally, the online teaching status was reviewed by the college and staff on regular basis and according to it, we were fine tuning our teaching practices. For instance, many students were facing Internet connectivity issues. Therefore, the college requested that all records of online sessions must be uploaded on Moodle. This practice provided more flexibility to our students and strengthened the asynchronous teaching.

Students Interaction and Community

Both synchronous and asynchronous communication are important to successfully implement an online learning environment (Asynchronous and Synchronous E-Learning 2020). In order to maintain a strong relationship with my students, a Kaizala group has been created for each module. The benefits are varied: keeping the students engaged, sending reminders, more flexibility. This also ensure the learning in collaborative environment space,

especially for the modules that has group components in as a part of the assessments. (Mohammed et al., 2020)

Unlike face to face classrooms, in which students have many opportunities to interact together and discuss about the course, in online learning, all the interactions are teacher centric. In fact, social interactions among students can enhance their knowledge, critical thinking and problem solving skills (Hurst et al. 2013). In order to foster student to student interaction, peer tutoring was implemented and online student meeting was arranged before the submission of the summative assessment. Many students enjoyed the idea and participated by clarifying each other doubts in a simple language. The instructor was with them only as an observer and to rectify any eventual incorrect information.

Technology for Teaching and Learning

The efficient integration of Technology plays a crucial role in the making the learning more meaningful and enjoyable. (Wantulok 2020). It can also improve significantly the student performance and learning outcomes. (The Boston consulting group 2011). In online classes, the need for applying supportive technological tools is more demanded than with face to face ones. The use of boards for explanation, activities and group discussions must be all soundly shifted to the virtual environment.

As a supportive tool for content explanations, some online tools were used such as “creately” to draw diagrams, “jot forms” to design forms and some free software such as “Cisco Packet Tracer” for network design.

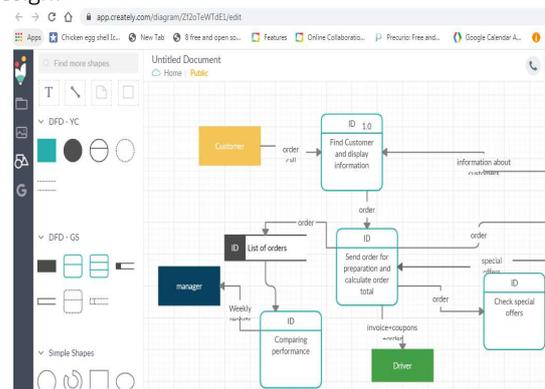


Figure 2: Creating diagrams with online tools

To conduct the classroom activities, different tools were used such a “Kahoot” quizzes for reviewing the previous class content and to check the student’s acquisition from

it, “padlet” spaces in order to enable the students share their answers and get feedback on it, “JCreator” for programming modules and “AnyDesk” to access remotely a student’s laptop if a student was facing a persistent error during networking lab.

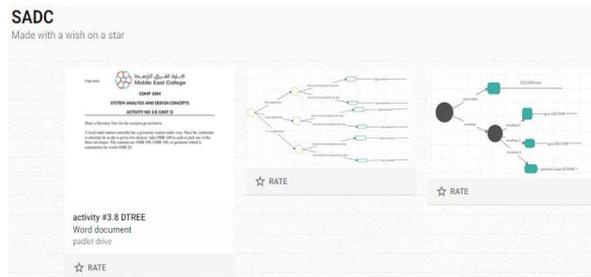


Figure 3: Using padlet space for sharing student’s answers

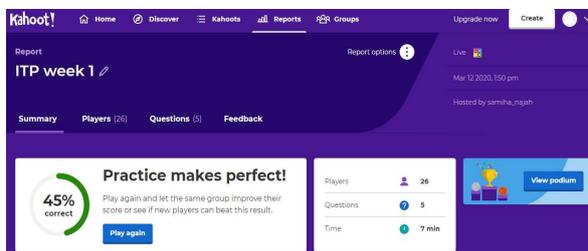


Figure 3: Kahoot 3uiz report

To support the students for preparing their assignments easily and step by step, the instructor designed an interactive video activity on Edpuzzle which has been attempted by all the students and impacted positively on their performance.

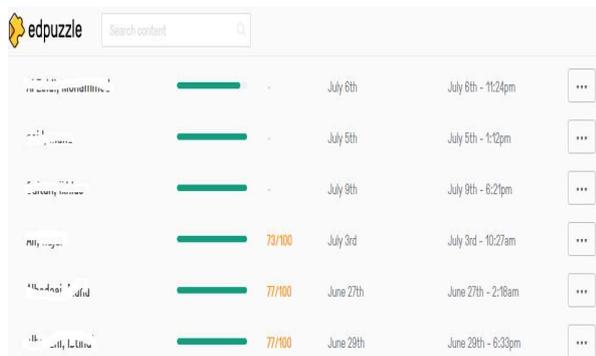


Figure 4: Edpuzzle report

To facilitate the smooth usage of these tools and techniques, it is important to ensure the user interface design and usability aspects. For this, the design of user interface of these tools must adhere to the Human Computer Interaction (HCI) principles in order to provide better user experience to the learners. (Al Mahdi et al., 2019) As per the demand of latest trends in education technology, various free and open source

tools are also trending, such as HTML5 based packages, which are browser independent and doesn’t require flash player to be installed. (Naidu et al., 2017)(Sharma & Naidu, 2020)(Hasan et al., 2020). The involvement of some artificial intelligence based elements such as machine learning with the learning management system further enhances the learning analytics and these analytics paves a way for the teachers to analyze the problem area faced by the students in the class, by means of checking their gradebook, as shown in Figure 5. (Naidu et al., 2020)(Rao Naidu et al., 2017). These tools are housed on cloud environment through learning management system, to provide increased visibility and open accessibility to the content and students are able to learn from any place at their own pace. (Naidu et al., 2019)

3. STUDENTS’ PERSPECTIVES

Evaluating the quality of learning from student’s perspective is very important to enhance the student’s satisfaction and hence the retention to degree completion. To this end, 3 ways of collecting the feedback from students were implemented: Group discussion, meeting with student and online survey.

Survey results:

The online survey has been shared with students from different modules and 25 responses were collected.

Q1. Online lectures can replace perfectly the traditional classrooms

The results show that half of the students are still not convinced with the efficiency of online learning. This can be explained by the fact that the students are more comfortable with traditional classrooms in which more accurate information can be acquired through teacher’s body language and other factors. As recommendation to address this issue, video cameras can be used to strengthen the contact with the attendees.

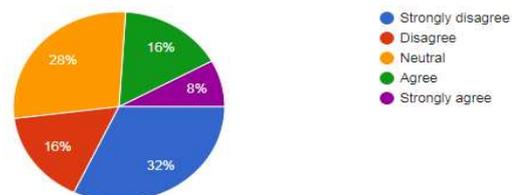


Figure 5: Comparing Online lectures with traditional classroom

Q2. Is the cost of online learning cheaper than traditional classes. Compare internet connection costs, Transportation costs, Hostel costs, etc. This demonstrates that many students perceived already the economic benefits of the online teaching. However, many students disagree on this fact as they may have to pay expensive fees for Internet connections.

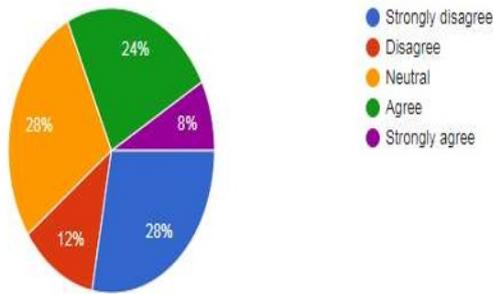


Figure 6: Cost of Online Learning

Q3. I faced difficulties to understand the new e-tools used for online classes
 The answers to this question demonstrates that the majority of the students were facing some difficulties to adapt to the new virtual environment.

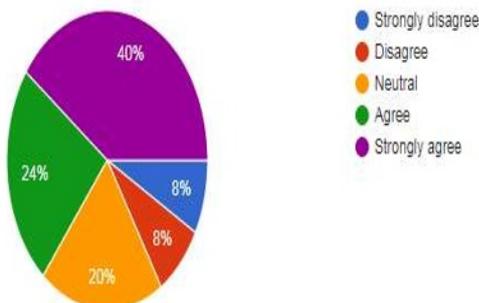


Figure 7: Difficulties faced with the new e-tools

Q4. Participation in online sessions is less intimidating for me than face to face classrooms
 The student's answers revealed that about half of the students are finding online sessions more intimidating than face to face classrooms. This result leads to further revisions on how the students are comfortable and intimidate to participate during the online sessions.

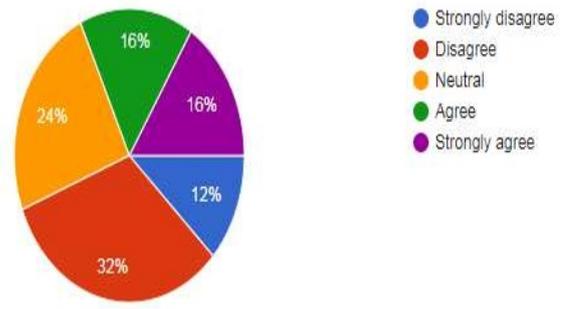


Figure 8: Participation in Online Sessions

Q5. Which of the following issues did you face in Spring 20 online classes?

According to this result, most of the faced issues are related to family conditions such as the presence of kids at home or others. The second important issue is about Internet connections. In the third place, two issues are highlighted: Students are not convinced with the efficiency of virtual classrooms and the lack of group discussions and communications. As recommendation to this issue, awareness on how to manage online sessions with difficult family situations can be shared with the students.

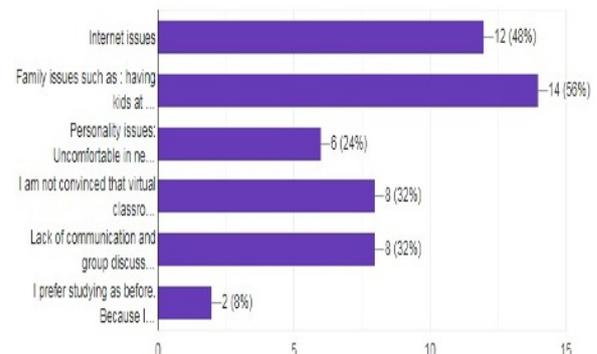


Figure 9: Issues faced in Spring 2020

Group discussion:

During an online session of Information System Management and while discussing about an activity on the pros and cons of Visio conferences for business meetings, the students were asked to

express their opinion on online learning implemented during COVID 19 pandemic by MEC.

Most of the feedback was positive and the students found that online learning is a great idea and very suitable to the current situation of COVID 19 as it helps to protect the health of staff and students and at the same time ensure the business continuity. They also appreciate the virtual learning framework features such as the session recording, which was not possible in the in-campus classes.

Nevertheless, the students identified a number of disadvantages such as the lack of eye contact and body language, which are important for enhancing their understanding.

Interview with students :

During one advisory meeting conducted in Spring 2020 with an advisee, the student affirmed that online learning has many advantages such as the ease of access, no transportation issues, recorded sessions and others. However, the student affirmed that she is not very comfortable with the alternative assessments strategy as it is based on assignments and the marks that can be acquired are less than what she can achieve with Close Book Tests, quizzes or lab exams. She was afraid that this will affect her grades.

Also, the student expressed that she is missing the in campus co-curricular activities such as ceremonies, events and other club activities with their friends and she affirmed that such virtual activities cannot replace the in campus ones.

4. Teachers' PERSPECTIVES

Evaluating the quality of teaching and learning from a staff perspective is very important to enhance the student's satisfaction and to increase the student's performance. In order to investigate the teacher's perspective of Online learning, a survey has been shared with a focus group of 7 staff and then analyzed followed by a personal evaluation of online learning as a teacher.

Survey results:

The results of the survey show that the majority of teachers agreed that the e-tools used in the implementation of their courses such as MS Teams, Whiteboard, Padlet, Kahoot and Kaizala were appropriate and supported the efficient communication between instructor and students as clearly shown in the diagram given below.

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 7 responses

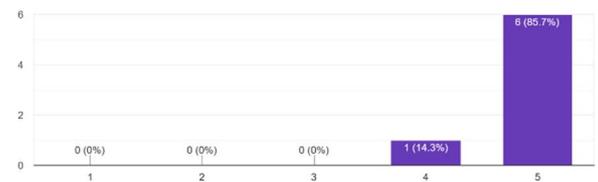


Figure 10: Teacher_Q1

When the discussion on traditional classroom vs online classes were considered, mixed responses were received and not all agreed to the complete online mode of the class.

Online lectures can replace the traditional classrooms and we can get the same or even better results.
 7 responses

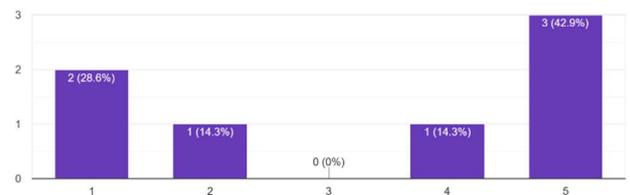


Figure 11: Comparing Online Learning with Traditional Classes

Majority of the respondents agreed that teachers should ensure that the new e-tools that they are learning and planning to implement in their classes should be easily accessible and adaptable to the students.

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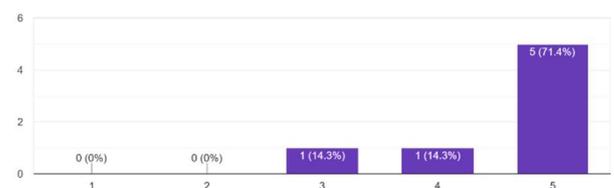


Figure 12: Usage of e-tools by teachers

Similarly, majority of the participants agreed that participation in online sessions is less intimidating for the students in terms of interactions, as they do not have to face anyone, and they can participate just using Chat / Voice option.

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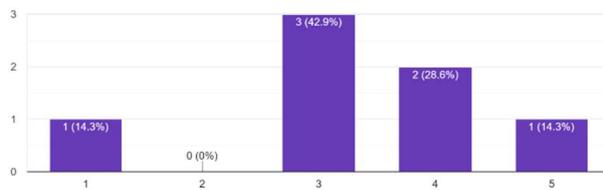


Figure 13: Participation in Online Sessions

Towards the end of the survey, many participants agreed to assessments in Online Learning are efficiently measuring the student's skills and fairly discriminating students according to what they deserve.

Do you think that assessments in Online Learning are efficiently measuring the student's skills and fairly discriminating students according to what they deserve?
 7 responses

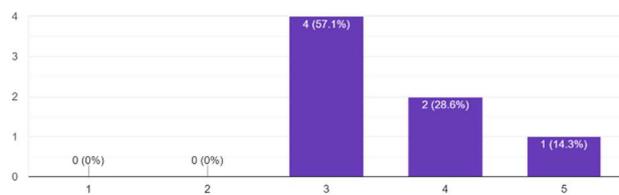


Figure 14: Assessments in Online Learning

Personal opinion as a Teacher

Online learning that we experienced during COVID 19 outbreak was an opportunity to have a step forward into the future of education. In its initial stage, a number of tools and techniques were implemented and evaluated such as Kaizala, Padlet, Kahoot, Socrative and others. It was then concluded that many students are not participating in the synchronous activity in which different e-tools were used as they are joining the online classes from their mobile phones. This lead to rethink on how these activities can be conducted with an integrated environment. In Fall 2020, One Note was used as a supportive tool for synchronous sessions. It was used for sharing extra materials with the students, explaining the topics with a variety of editing tools, uploading the student's attempts for in-class activities, giving feedback to students and for creating collaborative space and conducting group work activities. It has demonstrated great efficiency in achieving all these goals and was appreciated by teachers and students.

As the majority of our students are following their courses online for the first time, many of them expressed their worries and concerns about its efficiency. It was also noticed that some other students are not participating during online sessions and have a feeling of isolation. This resulted in an increase in the percentage of students who are not submitting the assignment reports or low performance. In order to provide more support to all the students especially those who are not well connected to others, Kaizala groups were formed and showed a great efficiency in helping the students to share their doubts, get help from the teacher and from each other's.

Ensuring the discipline in online learning is easier with the online learning as the teacher has many options in the synchronous meeting frameworks to control it such as mute all the participants and regulate the discussion by allowing the students to participate orally or in the chat or denying them. However, the teacher must make more effort to motivate the students to actively participate in the meeting. In fact, this does not mean that the student is really available and concentrating. This requires more effort from the teacher in order to efficient control the student attendance and motivate them to concentrate more. Moreover, checking the student's assimilation of the different topics is more challenging during online learning. Indeed, eye contact between the teacher and the student was playing an important during on-campus classes and was serving as real time feedback for the teacher to fine-tune the rate of delivery and to engage more the students and raise their concentrations.

5. CHALLENGES AND RECOMMENDATIONS

In this section, we strive to pay attention to the efficiency of the instructional design and the challenges that we encountered during the transition to online learning. Aligning with the institutional strategies needs to be kept in mind while having such approach in the implementation. Subsequently, we will provide a number of recommendations that can leverage both the quality of implementation and the student satisfaction.

The most common challenge that was faced by most of the students was network related issues. Since many of them were in remote locations where the internet connectivity was not up to the mark. Considering this issue, many students were unable to join the online sessions. To overcome this issue, all the

online (synchronous) mode classes / discussions were recorded and the recording links of video streams were shared with the students just in case they need to revise or for those who missed their class for the day.

The second important challenge was the family conditions which may present a pressure on the student undergoing a distance learning as well as his/her family members. This may result in less concentration during the online lectures or an obstacle to actively participate especially if they have kids at home. To alleviate the impact of this issue, student awareness on how to manage the family conditions for better distance learning results can be shared with the students through workshops.

Another relevant issue that was noticed was related to the rejection of some students to the virtual environment as they found it less efficient than on-campus teaching. This may be explained by the fact that students are missing some of the benefits of face to face classrooms such as the body language, eye contact, more spontaneous interactions and others. Moreover, due to reservations by many students, it is not possible to share the videos of each other during live classes. Hence conveying the message on the other side where students are sitting and just watching the screen and listening to the faculty, became quite tough. Because in many modules, it's important to keep the students engaged throughout the online session. This fact has been also observed when analysing the teacher's perspective. Teachers have to award the implementation of engaging activities more priority in order to enhance the student's engagement and to check that they are really attending and actively participating in the class.

The research findings of Fishbane and Tomer (2020) on what students with no internet access can do during this Covid-19 pandemic show that as the level of poverty in the community increased, the rate of internet connectivity decreased rapidly and by consequences, students with no or low socio-economic power to afford broadband connection are most vulnerable to falling behind or encountering additional challenges to meet up with others in online learning.

According to most of the teachers, the assessments in Online Learning are efficiently measuring the student's skills and fairly discriminating students according to what they deserve. However, some of the teachers expressed that preparing such assessments is more challenging in the current situation. Indeed, the assignment tasks must be carefully designed in order to prevent students from

committing any kind of academic integrity violations such as plagiarism, collusions and ghostwriting. As a recommendation for this, the teacher must have a clear insight on the level of his/ her students, follow their progress in the assignment tasks and identify all those in whom he/she may have doubt on the originality of the submitted work, call them for viva and apply the rules as stated by MEC Student Academic Integrity Policy.

6. Conclusion

Social distancing due to Covid-19 was a major factor driving the fast integration of online learning in all programs of Middle East College. After implementing a number of alternate strategies, evaluation was required in order to determine where we are in the landscape and where we want to be. Although Online learning has many benefits, a number of issues have been determined especially according to student's perception. After revealing the challenges that many students are facing, a number of recommendations have been suggested in order to improve the learning experience of our students in the next semesters. The teacher's perspective shows a number of pros and cons for online learning as experienced in Middle East College. In fact, many new features are now available in online learning which were not possible during in-campus classes such as session recording and better discipline controlling. In the other side, new challenges are now raised such as checking the student's effective attendance and assimilation of the different topics and designing assessments that efficiently measures the student's level and fairly discriminate them according to what they deserve. Online education is deeply rooted in adequate preparation and instructional designs with many hypotheses and models available, but because of the pandemic, the migration phase of universities to online education is uncertain because these processes have seen the lack of proper planning, design and creation of online instructional programs. Without taking cognizance of successful online education theories and models, the crisis-response migration approaches implemented by universities are restricted to distribution media. Therefore, due to the pandemic, the crisis-response migration should not be compared to successful online education or digital transformation of universities, but rather seen from the perspective emergency remote teaching platforms. Online learning in its entirety relies on technical devices and the internet, access to online learning may be refused to teachers and students with

poor internet connections. The reliance on technical equipment for online learning and the availability of equipment has been a major challenge for universities, faculty and students.

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