

# Digital Classrooms and Assessment Challenges in Higher Education

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## ABSTRACT

**Aim of the Study:** Digital classrooms became a new normal during the pandemic, though those were there and used by some institutions already, but the global transition from physical classrooms to digital classrooms became general practice during the pandemic. This paper aims to explore educators' experiences and concerns, primarily focused on assessment in digital classrooms. The primary objective of this study is to find out the challenges of educators in online assessment of university students.

**Methodology:** It investigates through semi-structured interviews by educators working in the higher education sector. It analyzes and reviews their experiences, views and concerns when it comes to assessment in digital classrooms.

**Findings:** The study reveals that educators had to face multiple challenges while ensuring transparent and accurate assessment both because of the digital divide and by exploiters. It also discusses how educators handle it particularly when things have gone shady and a few of the learners try to take advantage of them.

**Conclusion:** There is a need for comprehensive planning, training, skills and regulations to handle it and to achieve pedagogical and anagogical goals either by offering alternative assessment criteria or by incorporating digital tools to root out any discrepancies. The scope of this study is limited and covers only educators' experiences and perspectives, but it definitely suggests further investigation to find out students' experiences, concerns and challenges when it comes to examination on digital platforms and find a solution to make it smoother for both educators and learners in a digital setting.

**Keywords:** Digital Classrooms, Online Assessment, Digital Examination, On-camera Examination, Higher Education Challenges, Universities.

## Introduction

With rapid growth in communication and information technology, there is a significant impact on almost all spheres of life. No matter it's education, health, communication, finance, business or what, new ICTs have an impact and people's lifestyles are rapidly evolving. The use and application of digital tools in

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lesson planning, classrooms and testing is part of the education system in many developed countries. As young people are more exposed to technology, therefore they are considered as digital natives in recent times (Prensky, 2001). Many developing and under-developed countries are still focused on making sure that there are equal education opportunities for all and increasing literacy rate (Beeby, 2014). The digital divide is widespread in the major population of globe. During the pandemic and often happening lockdowns, many were left with no option other than switching to digital space, whether its work, school or entertainment. Using multimedia, digital devices and online space for educational setting is not something new, but seems different in some regions where the digital divide is widespread across the population.

On one hand, new ICTs have empowered both educators and learners and created new opportunities, but also offered new challenges. While dealing with young learners in K-12 schools, educators face technical challenges, where mostly learners themselves and many times their parents also need guidance on each and every stage to navigate into online classrooms (Paudel, 2020). At a higher education level, challenges were comparatively different. Sometimes, it's about technical skills relating to student engagement, attention span, maintaining interactivity and, most importantly, it's about transparency in assessment.

For digital classrooms, the Higher Education Commission of Pakistan had to do the needful, establishing their own learning management systems (LMS). It also allowed the use of available alternatives to conduct live lectures, quizzes, assignments, class activities, projects, sharing resources, conduct examination and share feedback with students while keeping a record of attendance (Mahmood, 2020). Some institutions chose to use one particular platform while others choose multiple options at the same time, which includes the following:

- Learning Management System
- Blue Button
- Zoom
- Google Classrooms
- Microsoft Teams
- Edmodo
- WhatsApp

Due to the digital divide across the country, some areas had poor internet connectivity, some had no internet at all, frequent electricity failures, internet affordability made many educators and students unhappy, but left with no other option other than using what could be done with limited resources (Rehman & Khan, 2021). For that reason, several educational institutions assured and monitor the availability of recorded lectures, whether it's through a messenger app popularly known as WhatsApp or any other chosen portal.

When it's about assessment, many universities allow teachers to choose the most suitable and convenient option for assessment, whereas some chose a particular mode like open-book exams, term paper, on-camera exam etc. At K-12 level, some classes were promoted on the basis of previous results, some were asked for open book exams and some had to go to campus for compulsory courses. For higher education, university students had no exemption from examination, though alternative modes for lectures and flexible options for communication were considered. This sudden digitalization facilitated and proved an effective stimulus to digitalize the whole educational set up, but transparency and accuracy of assessment procedure became a new debate. So, it is important to explore the transition of a physical classroom into a digital classroom in the context of opportunities and challenges for educators, especially dealing with grown-up youngsters at university level who do not seek parental guidance or control while using digital platforms, unlike early years' learners. The current research focused on two assessment systems consisting of both formative and summative, which further includes assignments, quizzes, class activities, presentations, course project, midterm and final term examination. For summative assessment, most of the universities ask for paper-based examinations.

This study is focused on achieving the following objectives:

- To identify key challenges of assessment in digital classrooms
- To understand the educator's experience and views regarding online assessment
- To highlight the satisfaction level

### **Research Questions**

**RQ1** What are the assessment challenges for media educators in digital classrooms at undergraduate level in Islamabad and Rawalpindi?

**RQ2** What type of experiences media educators have in digital classrooms?

**RQ3** What was the satisfaction level of media educators in Islamabad and Rawalpindi?

### **Literature Review**

Rapid technological advancements have made virtual or e-learning possible and easy. Anyone from any part of the world can now learn at their own ease from the comfort of their homes just through a device connected by the internet. There is no denying the fact that online teaching and learning is the present and future of the education realm. However, the recent pandemic COVID-19 accelerated the process of online education. Many institutions which were hesitant to transform their classical pedagogical method of learning are now forced to shift to online modes of learning (Dhawan, 2020).

COVID-19 suddenly and dramatically transformed the ways of living, working and interacting with each other at the global level. To contain damages caused by COVID-19, countries all around the world took social distancing measures, including temporary lockdowns, quarantines, travel restrictions, people physically distancing themselves, closing of schools, workplaces and shopping malls etc. The pandemic also massively affected educational activities. In a matter of days, from elementary to higher education level, every system had to adapt to online teaching and there was no available choice for media educators in a new learning scenario which was transformed from traditional to digital. The higher education institutions (HEIs) shifted from face to face to online, personal to virtual commands and from seminars/workshops to webinars/online meetings (Morales et al., 2021).

Online learning is web-based or virtual learning which uses a wide range of technological tools and applications different from the face-to-face learning method (Urdu & Weggen, 2000). First world countries were already similar to the concept of online learning. Before the pandemic, online learning was part of the curriculum and students were familiar with some aspects of online learning by using different online learning tools, like Moodle, Blackboard, LMS etc. Prior to COVID-19, the concept of blended learning was common in some universities, which involved amalgamation of face-to-face learning and online learning. However, adjusting to an online mode of learning has been an issue of grave concern in developing countries due to limited resources. The sudden shift from the traditional mode of learning to the online method of learning posed a lot of challenges for students, faculty and administrations alike, characterized by availability of resources (Heng & Sol, 2021).

The transformation from physical learning to online learning was sudden. There was no time for HEIs to prepare for the changes beforehand, which brought challenges of its own kind, especially in the developing countries who were not accustomed to online modes of learning before the pandemic. Some scholars referred to this as emergency e-learning, which was applied to similar situations in the past as well like when Hurricane Katrina damaged 27 colleges in the Gulf, making it impossible for on-campus courses. In response to that, they created an online catalogue for over 1300 courses as an alternative (Murphy, 2020).

A lot of work has been done on learning, instructional methods to understand and enhance both conventional and online learning experience. According to Graham et al. (2013), the instructional technology could be understood in a triangular structure that emphasizes the need to explore (what's

there), explain (why is it) and design (how to do it). Instructional technology supports learning theory, but the issues with assessment aren't addressed in this taxonomy. E-learning theory also focuses on the use of digital tools and technology for cognitive learning and understanding. Digital tools play a significant role as instructional patterns in education.

According to Morales et al. (2021), adaptation to the online mode of learning brought many challenges; among which technical issues was the major problem that teachers and students faced. They studied challenges faced by the students and teachers of HEI's and proposed workable solutions. They suggested that it is the responsibility of institutions to ensure that all students have access to proper infrastructure and support to solve technical problems. Moreover, institutions should also make sure that students of low socio-economic status are equally facilitated.

Morales et al. (2021) also found in their research that students of HEIs faced boredom, isolation, and inability to keep up with the pace of teaching. Professors were equally stressed due to this sudden transition, mostly with little or no prior training. This shift mostly affected the faculty members, who heavily relied on traditional methods of teaching and were not very handy with online teaching learning tools.

According to Farooq et al. (2020) challenges of implementing an online education system in developing countries like Pakistan are different from those of developed countries. Mostly because they were not ready for this sudden transition from face-to-face learning to online learning without any planning and prior faculty training and due to unavailability of required resources.

Heng & Sol (2021) studied challenges associated with online learning specifically in the Cambodian context. They were of the view that Cambodia faced substantial challenges because of this transition and limited resources regarding facilitation of online learning. They faced major issues because they had to adapt the online mode of education forcefully with little or no prior homework. According to them, one of the main issues faced by most of the students was the inability to afford internet facilities. A lot of students and teachers in South Asian countries, particularly in rural regions, do not have reliable internet services, which makes online teaching and learning experiences very frustrating and difficult. They also suggest that this transition from traditional to online learning created additional problems for students belonging to a low socio-economic status, as they are more susceptible to suffer academically due to inability to afford reliable internet and devices like laptops/computers. They mostly use smartphones to access learning materials, for making assignments and for taking exams etc.

Pandit & Agrawal (2021) conducted a study focussing on the challenges faced by the education sector in the realm of online mode of learning specifically in India and provided with some good recommendations. They said that though electricity is available in 99.99% of Indian homes, but the quality is questionable. Load shedding and power outages are common issues faced by the rural and semi-urban areas. This makes online learning unfeasible for most students regardless of locality. Students from rural areas travel to urban areas for higher studies because locations that are far from urban areas and mountain/hilly areas face poor internet and connectivity issues. They are of the view that the COVID-19 pandemic made things worse as it made students from far flung areas travel back to their native cities, therefore making them unable to access the internet and thus, the online lectures.

University faculty also face different kinds of challenges in online modes of teaching, especially in institutions where they were accustomed to traditional methods of teaching and are now forced to shift to online methods due to the pandemic. These challenges include; inability to handle online applications, problems with creating e-content, as it takes more time than creating content for on-campus classes, problems of slow internet making shared pictures blur and sound unclear to the students. Many teachers noted that students are less interested in online learning, not participating in online classes, are easily distracted by their surroundings, and do not respond to deadlines in case of assignments. People in South Asian regions mostly live in joint families where there is no concept of personal space, and they are

unable to take lectures in quiet or isolated places, thus distracting them from lectures and creating hindrance in understanding the content (Hassan et al., 2020).

The above discussed literature proves that challenges faced by developing countries due to the transition into online educational space are far more serious and pose serious consequences than faced by first world or developed countries. Keeping up with the discussed literature covering the challenges in the education sector, especially in developing countries where the online learning process was accelerated due to Covid-19, this study has discussed the obstacles faced by HEIs faculty in Pakistan in digital classrooms.

Assessment is no doubt vital and an important part of education; either on campus or online. The transition from face-to-face mode to online mode made the assessment method very complicated for the faculty of HEIs. It poses many more challenges for countries like Pakistan which have limited resources to make online learning a smooth experience and also because there are a lot of students belonging to a low socio-economic status and living in rural areas, where they lack reliable/fast internet services. For this reason, this particular research is aimed to discuss specifically their experience, satisfaction level and assessment challenges faced by university faculty of social sciences in Rawalpindi and Islamabad.

### **Methodology and Data Collection**

To explore satisfaction level, experience and assessment challenges faced by teachers during the transition from traditional to online classrooms, data is collected in the form of interviews from the faculty of Social Sciences based in Islamabad and Rawalpindi. For this purpose, 24 interviews were conducted with a purposive sample of teachers at undergraduate level, who had been teaching before and during the pandemic both in traditional and digital classrooms. The interviewees represented years of experience, class, gender and age. Overall, 14 female and 10 male faculty members were interviewed from four universities located in Rawalpindi and Islamabad. As far as experience is concerned, 3 of the interviewees have more than 15 years of teaching experience in multiple educational institutions, while 6 have around 10-15 years, 7 have 5-10 years of teaching experience, and 8 teachers have around 1-3 years of experience.

In terms of instruments, interviews were semi-structured and open-ended questions were asked to find out about their experience related to traditional and digital classrooms. This research particularly relies on a qualitative approach and semi-structured interviews were conducted. Interviews were conducted from educators (Faculty of Social Sciences) of four universities of Rawalpindi and Islamabad. For data analysis, NVivo has been used. The interviews were transcribed and analyzed based on their distinct themes. The findings were coded for further discussion.

### **Findings and Analysis**

During interviews, teachers shared their experiences, views and concerns related to digital classrooms and specifically related to online assessment. The transcribed data unfolded into multiple themes. That reveals insights into teaching experiences, particularly during student assessment in digital classrooms. It also highlights significant dimensions to improve digital assessment and ensure quality education.

***RQ1 What are the assessment challenges for media educators in digital classrooms at undergraduate level in Islamabad and Rawalpindi?***

#### ***Plagiarism Check***

When teachers were asked about plagiarism check, it was found that most of the teachers had hundreds of assignments and term papers that makes it harder both technically and personally for an individual to check plagiarism, but still they found traces of copied words.

T1: “While teaching, having around 250 students in my four courses and having a short deadline for result submission, it was not possible to check plagiarism of 500 assignments (2 for each student in each

course), 250 term papers. Even then, I found multiple plagiarized papers because many were copied just from Wikipedia and from the first few searches of Google.”

T7: “I prefer to give applied questions in exams. Mostly, there is nothing to cheat. But in online exams, even then, some cheated each other. While assessing, I sensed that they shared their paper with each other or something similar happened otherwise it could not be similar in any way.”

So, having manual assistance or a digital tool on LMS that could directly check plagiarism for any submitted work could add ease and efficiency for education in assessment.

### ***Viva Voce***

Many of the educational institutions added compulsory viva to ensure transparency in assessments. It seems like a complete package to have a written exam and then go through viva voce, but educators face multiple issues with that too.

T3: “During viva voce, few prepared write-up well, but some did not bother to prepare for that, rather when a student couldn’t perform well in viva and said that as the written exams carry 40% marks and viva only 15%, so, there is no chance to fail the course.”

According to more than half of the interviewees, their students were not as well versed in viva as they performed in a written exam that shows some kind of shady input in the exam.

T22: “In online viva, I could feel that a few students were reading on screens or elsewhere, then I had to ask them cross questions.”

### ***Technical Issues***

Being a developing country, there are some genuine issues like electricity shortage, internet connectivity, device affordability etc. At the same time, some used such excuses to foul play during exams as perceived by their teachers. Both teachers and students faced technical problems during online exams and classes.

T16: “Electricity failures are quite often around the country, so, when any student gets disconnected and disappears all of a sudden, I start getting messages and calls that it is because of electricity. The same goes with internet instability and poor signals in some areas. There are few genuine cases, but it’s hard to decide and then, having limited time for exams, too many students and teachers also have the same resources.”

T5: “I do experience electricity failures or internet disconnection but me and most of my colleagues arrange backup beforehand. Personally, I use PTCL-broadband and also Zong-4G internet devices and also mobile data packages. If one stops working, I switch to another. Same, I have an electricity generator. And I have seen a few of my colleagues going to other places, universities, libraries or alternative places during the lockdown too, just to have it covered from my side.”

So, as a genuine case, technical divide exists among both the students and educators, chances of exploitation can not be overlooked.

T13: “Despite my own arrangements, I cannot make sure for all of my students and neither can anyone else. Some belong to far-flung rural areas having no or limited basic needs. They were forced to travel to nearby urban areas or places where they could have a chance to get signals. It’s hard for them and for me. Then, others may face the issue of access to resources that ultimately becomes a chance of exploitation too.”

## ***RQ2 What type of experiences media educators have in digital classrooms?***

### ***Submission Issues, File Conversion***

In general, university students are grown up and are expected to use digital tools more frequently, but not all as shown by teachers' responses. Some took too much time on file conversion, submission and kept on asking teachers to assist them.

T2: "I have been explaining to them about the file conversion and submission process. Sometimes, it took me an hour or more to collect all the responses, confirm receiving and check if they submitted the right file"

Being naive of digital tools could be true for some students, but blaming technology to cover up intentional foul play has been observed too.

T11: "Two of my students sent me the same term papers with different cover pages. It was not a group work or in pairs, rather a completely individual task. So, what did they assume that the teacher wouldn't read or wouldn't get to know? Later, they told me that it was a technical error but failed to prove it."

## ***RQ3 What was the satisfaction level of media educators in Islamabad and Rawalpindi?***

### ***On-Camera Presence***

When it comes to on-camera presence, a teacher cannot make sure and force. As there could be actual technical issues and then, intentional excuses too.

T21: "For the on-camera exam, they were asked to turn on their cameras, roll call and then, exam started. For the entire duration, not all remain on camera. A few have genuine issues but not all."

For standardized exams like GRE, on-camera presence is a must or a test gets canceled, then they are paying a huge fee and feel responsible. But, during university exams, when many students come up with the same issue, they find it their strength. Secondly, having thousands of students, it takes a lot to cancel and retake exams, while genuinely disadvantaged learners can suffer more and, many times, they cannot pay for that.

T11: "Some used transparent sello-tape to blur the camera, some used saliva to blur it during the exam and called it a technical issue, as they told me themselves later and laughed it out."

### ***Microphones-On***

Unlike standardized examinations, university exams are conducted for so many students at the same time and invigilators have to make them smooth. While having microphones on, many have noisy backgrounds which causes disturbance for other exam takers.

T4: "It's so hard to keep both microphones and cameras switched on during exams. I tried that earlier, but it did not work well. At one time, I had around 30 students, taking exams from home. There was distraction almost all the time from some of them, noisy backgrounds, family or kids roaming around and that disturbed the overall class and other students were unable to concentrate on the exam."

### ***Special Arrangements***

There were two factors when it came to making special arrangements. Having a huge digital divide and class differences, not all can make special arrangements. Secondly, some find it overburdening and refuse to do so, as they are new to online classrooms.

T19: "Standardized testing is different from formal examination, as they were charging well for an exam that ends in one go rather than dealing with individual students. Then, students take those exams for a specific purpose and pay well. So, they make proper arrangements."

Educational institutions were criticized for asking for any special arrangements, as some students were of the view that they pay for a physical classroom and universities have to arrange everything on their own not to bother them with additional requirements.

T24: “Many of my students were not happy with digital classrooms, they were of the view that they pay to study in a physical setting and fail to understand that it’s because of a global emergency, otherwise why would universities opt for online education specifically when there is a huge digital divide across the country. So, asking them to make special arrangements may work for some but not for all.”

### ***Isolated Quiet Areas***

It’s more comfortable to have an isolated, quiet place to study or to take an exam. During online exams, some choose the same, but some arranged gatherings with their classmates in exams too and that questions transparency.

T9: “Some students chose to sit in quiet areas, no distraction with more focus. But I have seen a few cases where students gathered just for the sake of exams and helped each other, sitting in different corners of the same room, using their own laptops or phones.”

All of them couldn’t be forced to have isolated quiet rooms due to socio-economic demographics and that gave an edge to exploiters as well.

T1: “Some are living in a joint family system, or have small houses and left with no other chance to find an isolated corner. So, I try to understand their situation. Not everyone has his/her own room or a big enough home. Even some families do not cooperate with their kids on the issue of digital classrooms and isolated space.”

### ***Overall Grades and Teachers’ Satisfaction***

The responses show that the students performed well in online exams as compared to their engagement, participation and interactivity in physical classrooms.

T12: “In digital classrooms, interactivity wasn’t the same, but results were better than in physical classrooms. When we had to switch to online set up back in Spring, 2019, almost half the semester was over. We were done with the midterm exam, and we conducted the rest of the classes and assessment in our digital classrooms. Many of the students who got low grades in midterm performed much better in the online exam. Leaving that aside, as some actually improve after a setback in an assessment, but it happens again and again.”

When an online exam’s results were not well aligned with viva voce, teachers face difficulty in considering the whole input as fair.

T16: “Most of my students did well in exams but could not perform well in viva voce. So, if they actually improved and learnt, they had to be good in the oral exam too.”

### ***Discussion and Implications***

Overall, teachers’ responses revealed that the digital divide seems to be an alarming issue that refrains some students to equal opportunities from not everyone can afford a computer or smartphone to make sure on-screen recording and their camera presence at the same time. Living in far-flung or rural areas also makes it hard in terms of internet availability and smooth electricity supply. As electricity failures remain a common issue in big and metropolitan cities too.

Secondly, there were digital tools available to lock the screens for a time period and one cannot open multiple screens while working on LMS. So, institutions need to invest in that. Having a limited budget, institutions could be reluctant to do so. In that case, industry may support the education sector because the graduates have to be in the field and poor assessment may lead to a huge fiasco among human resources where graduates having the same degrees and similar grades may not compete in skills and knowledge.

Thirdly, it has become evident that having large classes and multiple courses at the same time, makes it harder for an educator to test plagiarism for each and every work being received though highly needful. For that, LMS needs to be enabled enough to automatically check the plagiarism on submission. So, again, digital tools themselves can change the game both in digital and physical classrooms. According to some teachers, whether it's an open book exam, term paper or on-camera exam, an applied or conceptual type of assessment may help to avoid plagiarism or cheating and also make them think and apply it.

## **Conclusion**

This study reflects teachers' experiences and perspectives on online assessment, satisfaction levels and experience in digital classrooms during the ongoing pandemic. Although the data shows some similarity in experiences and issues, it also shows a different perspective too, when some media educators were of the view that the examination should be held with strict rules and regulations, while others saw discrepancies in contextual view. It was observed that digital classrooms have become normal, but digital assessment, but it requires further consideration by both institutions and educational bodies to incorporate digital tools to enhance transparency in assessment, whereas it's highly important to bridge the digital divide in a country like Pakistan for equal opportunities and quality of education even after post-pandemic world.

## **Limitations**

This study is only limited to media educators' satisfaction level, experience and challenges in online assessment who switched from physical to digital classrooms as per need. Then, the sample size was small and limited to media educators only from just Rawalpindi and Islamabad. The same research area needs to be explored through students' perspectives and also on a larger level to make sure of the accuracy of findings, where we can find new dimensions too.

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