

## ORIGINAL ARTICLE

# OVERCOMING CHALLENGES OF STUDENT ENGAGEMENT IN ONLINE HEALTH PROFESSIONS EDUCATION: AN EXPLORATORY, QUALITATIVE STUDY

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**Background:** Student engagement is a major issue faced in online education. This study aims to explore the challenges of student engagement in online learning for a health professions education program. **Methods:** This qualitative explorative study was done involving 6 faculty members and 12 students from Pakistan's three Masters in Health Professions Education (MHPE) programs using semi-structured interviews and NVivo v12.0 for inductive, thematic analysis. **Results:** The study focused on addressing student engagement challenges and post-pandemic learning preferences, identifying 9 themes including teacher training, internet connectivity, student participation, distraction reduction, online learning environment improvement, and engaging activities. **Conclusion:** The COVID-19 pandemic has led to a shift to online medical and dental education in Pakistan. However, challenges persist in student engagement. To boost student engagement, medical colleges should implement proper training, high-speed internet and smaller class sizes, requiring administrative efforts and proper infrastructure.

**Keywords:** Student engagement; faculty development; health professions education; online teaching

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## INTRODUCTION

The Covid-19 pandemic has significantly impacted education worldwide.<sup>1</sup> According to UNESCO more than 80% of schools adopted online learning models.<sup>2</sup> For students' enhancement and improvement of learning outcomes, educators and researchers preferred online learning.<sup>3</sup> This has led to debates on its benefits, student engagement, and well-being.<sup>4</sup> Sudden transition from traditional to virtual education to make students and teachers understand about this system.<sup>5</sup> Despite challenges such as connectivity, teacher development, student support, and availability of online learning tools<sup>6</sup>, the benefits of this system are undeniable. However, maintaining student interest and motivation is crucial for effective and quality online learning.<sup>7</sup> Listening, teaching students in advance the benefits of learning, encouraging early retention of current information, improving performance, providing feedback, evaluating performance, improving retention and transfer are activities designed to stimulate students.<sup>5</sup> This study aims to identify ways to address the problems faced by teachers and students regarding student engagement during online learning. By doing so, educators can enhance learning outcomes and improve student well-being.

## METHODOLOGY

The study design was Qualitative Exploratory<sup>8</sup>. An attempt was made to explore how the students and faculty members interpreted and made sense of their experiences related to overcoming challenges faced in

the context of students' engagement as they went through the newly shifted online learning.

This study was conducted in the Medical Education Department, Institute of Health Professions Education and Research (IHPER), Khyber Medical University (KMU), Peshawar, Pakistan. Participants were recruited from three different institutions in Pakistan conducting an online Masters of Health Professions Education (MHPE) program: Khyber Medical University, Riphah International University (RIU), and University College of Medicine and Dentistry (UCMD). Ethical approval was taken from all ethical review committees of the three institutes. Purposive sampling technique was used. Six faculty members and twelve MHPE students participated in this study, two faculty and 4 students from each Institution.

One to one, semi-structured interviews were conducted over Zoom. The participants were asked about solutions to challenges faced related to student engagement during online teaching of MHPE and post pandemic learning preference. All interviews were audio recorded. The interviews were then transcribed into word processing format. Credibility and triangulation were ensured by sending the transcribed files back to the participants. The data was analyzed cross-sectionally, F representing faculty and S representing students.

Inductive, thematic analysis was conducted using NVivo. Similar content was exported to individual nodes in NVivo. Then these nodes were re-assessed to evaluate emergent patterns. Recoding was then performed to identify themes and sub themes. The final

node files were then exported to MSWord. The researchers performed the thematic analysis. The themes were finalized after the researchers reached a point of consensus, thereby ensuring triangulation.

## RESULTS

This study focuses on overcoming challenges in online student engagement and post-pandemic preference of learning mode, with emergent themes. Nine different themes were found in relation to how to solve problems with online student engagement:

### 1. Teachers Training/ Faculty Development

Instructors received e-learning training through online tutorials, senior assistance, and distance learning courses to enhance their skills:

*“Early software learning, YouTube tutorials, senior advice, and a distant learning course were utilized to enhance my skills.”* (F2)

### 2. Internet Connectivity

One of the key problem was related to the internet.

*“I changed my server with a good connectivity one.”* (S12)

To allow them to access lectures, the institution should give them access to some sort of internet gadget:

*“The university should provide internet devices that are compatible with various applications like Zoom and Mockee, with good speed and connectivity.”* (S10)

### 3. Increase student participation

Some participants asserted that increasing student participation through question-and-answer sessions after lectures:

*“the questions answers sessions with the teachers, they were very engaging...”* (S9)

A few individuals thought that small group activities may be undertaken using Zoom’s breakout rooms and other capabilities to increase student engagement:

*“Online education offers a simpler way to engage students through group activities, group settings on Zoom, and individual presentations”* (F3)

In addition to this, workshops can also serve to improve student engagement:

*“Our MHPE sessions were primarily engaging workshops conducted in the last contact session, with some activities provided to our class fellows, so very engaging and interesting also.”* (S10)

Assessments also tend to increase engagement levels:

*“bringing assessment; pre assessment and post assessment... help with engagement as well...”* (F5)

### 4. Reducing Student Interruptions

Attendees faced interruptions during lectures, and teachers should encourage students to turn off their microphones when not interacting:

*“(for) voice interruptions, I just pointed out once or twice to turn off their mics.”* (S12)

Participants found that teachers can enhance student engagement by fostering connections and interaction

through camera use, name introductions, asking questions, and regular check-ins:

*“The facilitator asked participants to turn on cameras, introduce themselves, and ask questions after 10 to 15 minutes of discussion. If someone didn’t answer, the facilitator asked the reason.”* (F2)

Getting digressing pupil to return to the topic was another crucial tactic:

*“when students started to talk out of context, there I had to stand up towards them and bring them on board for a certain task.”* (F1)

### 5. Reduce interruptions/distractions at home

It was advised that female students with children lock their rooms to keep the youngsters out in order to minimize disruptions at home:

*“(During lectures) I lock my room so my kids don’t enter.”* (S4)

### 6. Increase students’ focus

One participant suggested exercising to sharpen attention after prolonged computer or laptop use, as it can be draining and difficult to focus:

*“I did certain exercises to increase my focus and tried my best to interact in the online session and give my point of view where necessary.”* (S4)

Learning from home can be challenging due to lack of a physical classroom environment, so it’s crucial to create a conducive learning space:

*“I used to create an environment of classroom for myself. Early in morning I used to sit on chair and table to keep myself more engaged.”* (S9)

The lecturers were advised to use two computers to present material and read literature simultaneously, which was a helpful suggestion for maintaining lecture productivity:

*“having two laptops, one for content presentation and other for checking reviews side by side is a suitable option.”* (F2)

### 7. Improve online learning environment

A conducive learning environment is achieved through class strength, which becomes more engaging with fewer pupils:

*“Smaller student numbers, small group lectures, and trained facilitators can increase engagement in lectures.”* (S11)

Additionally, flipped classrooms should be employed to improve student engagement, and lectures' subject matter should be based on adult learning concepts:

*“Adult learning principles emphasize meaningful, relevant content that helps learners understand their actions and motivations.”* (F5)

A skilled lecturer will tailor the material to the students' understanding and delve into their prior knowledge of the subject:

*“The instructor delved into students' prior knowledge and attempted to explain the aspect of the topic he believed they were lacking in.”* (S8)

Teachers should reduce instruction pace to allow students to catch up after internet connection restoration, addressing interruptions caused by lost internet connection:

*“Students were advised to maintain a slow pace and repeat information due to distractions and internet interruptions, as suggested by their seniors.”* (F2)

Teachers reported summarizing the topics every 10–15 minutes to help students who arrive at lectures later than the scheduled time for various reasons to catch up:

*“I summarize tasks every 10–15 minutes to ensure everyone can catch up easily, even if they join late or miss a few minutes.”* (F4)

#### 8. Training students

The lack of knowledge on online learning software usage leads to various issues, necessitating proper training for instructors and students to effectively utilize the platform:

*“Before MHPE session students should have an orientation session with IT department so that they are trained to use software.”* (F2)

Online learning is a new concept in our nation, requiring education for both students and teachers on its usage, proper communication, and learning etiquette:

*“First of all is the training of the faculty, the training of your students and mindset of your student... teach them etiquette, teach them communication skills and different things.”* (F3)

#### 9. Engaging activities

The teacher’s level of excitement and readiness ultimately determines the extent of pupil participation and engagement:

*“How actively teacher is engaged and his level of enthusiasm and teaching should be good for engaging students.”* (S12)

Calling students by their names enhances the learning process, according to both teachers and students:

*“Teachers who know students’ names, as we have a rapport with them, seem to be more attentive in the learning process.”* (S9)

The lecture was enhanced by stimulating students’ thought processes and organizing it to address their queries and make their concepts clear:

*“To engage students, add interesting questions or remarks after 5–6 slides and include interactive PowerPoint material.”* (F2)

Another mentioned activity was the use of quizzes during or after lectures to keep students engaged and to promote attention:

*“Putting some quiz or something interesting like that which is not necessarily academic, (helps engage students)”* (F2)

Polls were used to assess students’ understanding of lecture material, found entertaining and productive by both faculty and students.

*“... using other mediums such as polls or asking students to comment and answer were more engaging.”* (F1)

Preparing lecture content, allowing students to comment on delivery, and assigning tasks like creating and delivering presentations helped maintain student attention:

*“... giving tasks or giving content for the coming sessions was more engaging.”* (F6)

Participants found various technologies, including Google Docs, Padlet, Whiteboard, Kahoot, and Whiteboard, effective in improving online learning experiences, with Kahoot being a popular tool:

*“A class on Kahoot taken by one of our facilitators, the topic was very interesting and this class was very interactive.”* (S7)

Instilling competition in students can maintain engagement and promote learning through the use of specific games and gaming equipment.

*“there were multiple games-oriented or pictorial tools that were used for engaging us in online classes.”* (S4)

Finally, the assignments given to the students should not take a lot of time:

*“The tasks should be of lesser time span such as 15 or 20 minutes, regular feedback should be taken from the student and there should also be more activities.”* (S4)

The learning modes opted by the number of students and faculty is shown in Table-1.

**Table-1: Post-pandemic preference of learning modes**

Learning mode	Faculty	Students	Quotes
Online	3	2	<i>“The program can be effectively online, but requires proper campus and learning management systems, including lecture recordings and blogs, to maximize its potential.”</i> (F5)
Blended	3	9	<i>“masters programs are more suited for blended learning as students and teachers who come from far-off places it is better for them, as I can go to my job and attend my session from there”</i> (S11)
Face-to-face	-	1	

## DISCUSSION

This study found nine different themes for overcoming student engagement challenges and post-pandemic learning preference.

To improve their skills, teachers should complete distance learning, attend online courses seek advice from elders, and for learning adopt various free online courses that will help them create engaging classrooms for students.<sup>9</sup>

In the transition to online learning, the best research, network connection or collision is the most difficult.<sup>10</sup> In Jiang *et al*<sup>10</sup> study, teachers and students were advised to develop backup plans or other ways to continue if the primary line of instruction fails. Teachers and children who have difficulty using the Internet

should receive help and care. It reported that school-based services such as collaborative learning, financial support, and teacher development are critical to ensuring teacher and student satisfaction is the focus of online teaching.<sup>10,11</sup>

Some participants believed that creating question-and-answer time after class, especially for students who did not participate, would increase student participation. Discussion is a form of active learning that allows students to interact with information through discussion and reasoning.<sup>12</sup> There is evidence that peer influence and teacher feedback can increase interaction between students and teachers, and online discussions can improve student e-learning.<sup>13</sup> Effective teacher training and communication can help compensate for the lack of face-to-face interaction and increase online engagement.<sup>14</sup> Distractions throughout the presentation create difficulty for participants. Jiang *et al*<sup>10</sup> suggest that teachers correct the conversation and give appropriate advice when necessary.

Long-term computer use can cause fatigue, headaches, and eye strain.<sup>15</sup> Physical education is recommended to improve thinking. In a virtual classroom, sitting in a chair and placing a laptop on a table can make learning more productive. The interactive classroom environment should be maintained through small groups, frequent content posting, and the use of a 'Notes page' as a useful learning aid, fostering interpersonal relationships and supporting common goals.<sup>16,17</sup>

Lack of knowledge about e-learning can lead to issues, so proper training for students and teachers is crucial. Online education, staff training, student mentoring, and IT assistance can enhance satisfaction during online learning.<sup>11</sup>

The teacher's interest and preparation are crucial for student participation. Online courses can lead to turnover<sup>18</sup>, so scaffolding and problem-solving are essential. Slide-based summaries can be used for lectures and discussions.<sup>19</sup> Post-learning and online assessments are recommended.<sup>10</sup> Encouraging student engagement through competitive environments and using special games can improve communication and cooperation.<sup>11</sup>

This study found that three out of six teachers support the online learning model, while three feel blended learning is better due to its flexibility. Rajab *et al*<sup>6</sup> support online learning. The majority of students believe a blended learning program should be adopted, as blended learning methods are effective<sup>20</sup> and can eliminate limitations of traditional teaching methods<sup>6</sup>. To increase satisfaction, Elshami *et al*<sup>11</sup> recommend combining synchronous and asynchronous online technologies and integrating multiple applications with learning management. To benefit from online education, an appropriate management system must be

implemented, with sufficient time for planning and support from the team or manager at home.<sup>21</sup>

## CONCLUSION

The COVID-19 pandemic has led to a shift to online medical and dental education in Pakistan. However, challenges persist in student engagement. To address these issues, it is suggested that as universities can save money from not conducting face-to-face sessions, this budget can be used to buy internet connection equipment. Faculty and student development should be done before starting the online MHPE session. Students should be motivated through more engaging activities, such as games and interactive polls. The class size should also be kept smaller. Students should simply lock their rooms to prevent interruptions at home.

If meticulous steps are taken, these challenges may be overcome. Recommended measures include student and faculty development, online engaging activities, smaller class size, and provision of good internet connections.

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