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Perception of Faculty and Students Regarding Effectiveness of Online Experience, a Cross-Sectional Study

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Abstract

Background: The Education system has taken a 180-degree paradigm shift since Covid-19 wrapped up the prevailing global system. Now educational system used made electronic communication devices the prerequisite. Not only were the students, parents, and teachers dragged out of their comfort zone to learn and stretch their expertise in the digitalization of education and work. The endeavor has brought us to set standards and meet the needs of new standers. This study aimed to discover the suggestions of students and faculty to deal with the resentment that is being experienced with this online facade. ***Methodology*:** Cross-sectional study from March to May 2020, total participants was 523 including male and female medical students and faculty. Ethical approval was obtained from Ethical committee CMH Lahore Medical College and Institute of Dentistry (CMH LMC & IOD). Verbal informed consent was obtained. Self-administered questionnaires were given to the participants. ***Results*:** E-Learning opportunities need to be taught explicitly. Modern tools are the need of time. The faculty needs to understand student psychology as well as the application of modern tools and gadgets. ***Conclusions:*** E-learning posed a technological divide among the faculty members and students. The pandemic allowed us an opportunity to explore the realms of the digital world and expand our horizons to challenge the already existing medical education system, curriculum, and mode of its execution.

Keywords: Corona virus, Covid-19, Pandemic**,** Online Education, Medical Education, Artificial Intelligence.

INTRODUCTION

When the epidemic began, no one had the idea they will be facing a pandemic that would last years. As soon as situation began to go out of hands, various countries began to take measures to contain it. In the true sense, the challenge was not containing it when it began, but to be able to deal with sustaining those measures while the pandemic was being controlled. The emergence of Corona Virus Disease 19 (COVID-19) as a pandemic summoned every part of daily living. The concept of work from home to classes from home had shifted life to learn from home and educate from home. The institutions, companies, business owners, families all responded with care at large to follow the standard operating procedures set for COVID-19 Pandemic.

All over the world, different software started developing that could cater to people's needs of effective communication in the newly diagnosed era. Having closed institutions for an undetermined time period necessitated the boards and educational authorities to decide how to run the curricula and beat their defeat at the hands of time strategically at least. To cater to these concerns the software were used to establish online classrooms, discussion platforms and session spaces. These platforms included zoom, Google classroom, Meet, Teams, Facebook live, YouTube, Moodle and many others. Each of these platforms had their own efficacy for health professions education online classes and the study performed aimed to assess the efficacy of an online classroom whatever the means were used.

It must be noted that an acceptance to online education was long overdue. The times that presented left no option for the educationists, but to reform an online education plan that fits the global system. Work is yet being done in this regard and even after a year there is immense room for improvement. A wide range of teaching targets can be accomplished virtually if the students and faculty embrace this online educational platform. The objective of this study is to take into account the loop holes that have been hampering progress in the success of online classes in health professions education systems.

MATERIALS AND METHODS

Study Design and Settings: Analytical cross-sectional study was conducted online from March-May 2020 with faculty and students of CMH Lahore Medical College and Institute of Dentistry (CMH LMC & IOD) as study participants. Study was conducted online. Data was analyzed using SPSS 24.

Ethical Considerations: Confidentiality of the data was maintained. Informed consent was taken. Participants had the liberty to withdraw anytime. Ethical approval was obtained from Ethical Committee of CMH LMC & IOD.

Inclusion criteria

1. All faculty and Students from CMH Lahore Medical College and Institute of Dentistry.

Exclusion criteria

1. Students of Allied Health Sciences
2. Parents and siblings
3. Health care providers

DATA COLLECTION

Self-administered pre-validated online questionnaire was provided to medical faculty and students with informed consent. Survey procedure was explained to all participants. Total number of participants was 523 including male and female medical students and faculty. Questions were kept simple and understandable. SPSS 24 was used for the analysis of data.

RESULTS

This paper takes a modest step in that direction by surveying 473 students and 50 faculty from CMH LMC & IOD) Pakistan. We were found faculty and students are both struggling with interactivity, communication and are resorting to options that fall very much short, and in some cases are so resource intensive that they are impractical in resource-constrained environments. We also found cases of faculty over-reacting to student misbehavior by shutting down whatever meagre interactivity that existed in group chat.

Students and faculty are at odds with each other regarding switching on the camera video during online sessions. A large majority of students, 73% of 474 students, in which 169 (42.1%) first year, 76 (19%) second year, 63 (15.7%) third year and 93 (23.2%) did not want to turn on their camera video.

Table-1: % Response of Students and Faculty on survey

S/no	Survey Questions	Less than 10%	Less than 20%	Less than 40%	Less than 60%	More than 60%
1	How many classes students have taken during lock down	46	83	137	108	98
		Fully agree	**Agree**	**Neutral**	**Disagree**	**Fully disagree**
2	Opinion to attend the class with video on	16 (3.4%)	44 (9.3%)	67 (14.1%)	158 (33.3%)	189 (39.9%)
3	Do you remain engaged & attentive during conducted online classes	22 (4.7%)	127 (26.8%)	140 (29.6%)	105 (22.2%)	79 (16.7%)
4	Your satisfaction level about achievement of the learning outcome of online classes	14 (3%)	127 (26.8%)	166 (35.1%)	57 (12.1%)	109 (23%)
5	Regular physical classes format is better than virtual classes	167 (35.3%)	39 (8.33%)	124 (26.2%)	33 (7%)	110 (23.3%)

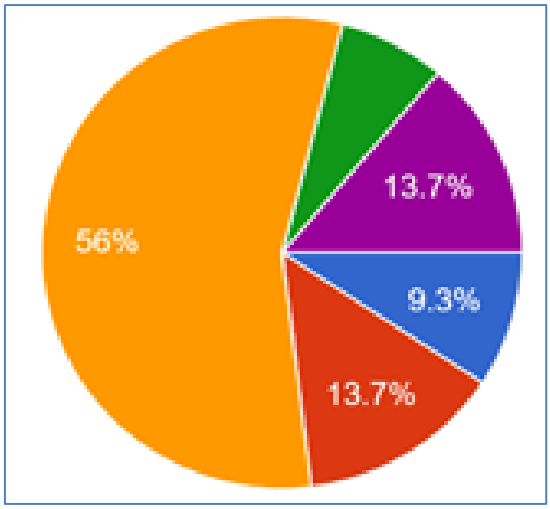

Fig-1: % want to learn asynchronous classess

While a large majority of the students stated that they would like the college to open as soon as possible, 79% of 473 students wanted asynchronous online sessions, i.e, without a live teacher guiding them through the session. A simple majority, 56% wanted to learn from recorded lectures. This is interesting because these two preferences appear to be at odds. Why would students who otherwise want to sit face to face with their teachers not want to have synchronous online sessions?

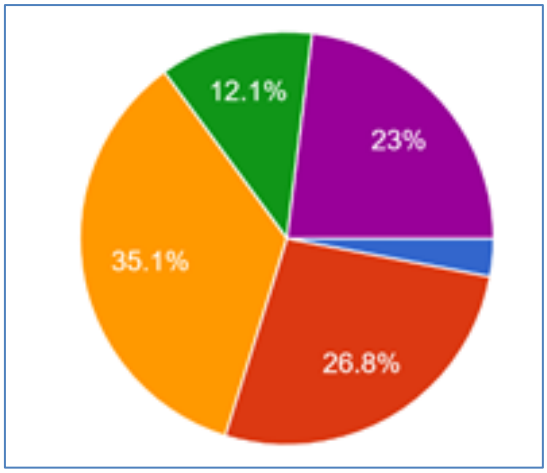

Fig-2: % of students engagement during online classes

A clue to a probable answer can be found in fig 2, where 68.5% of the students report that they are not engaged well. This is consistent with the student responses to our open-ended questions. It appears that they have given up on quality interaction on a synchronous Zoom (or any other video conference) call.

1) When students were asked how they compared online classes with regular on-campus classes, as many as 28% of the students preferred online classes.
2) We saw a large variation in response to the question "How many online sessions did you attend during the lockdown?" The college principal would have ideally liked to see one response, i.e., all students had taken all offered classes. However, the reality is given in Table 1. There may be multiple reasons for this variation, including:

a) Lack of resources. Not all students had access to internet-connected devices at home.
b) Lack of appeal of online education.
c) Manifestation of a teacher's lack of skills in teaching. Before the pandemic, the students were obligated to be in the class to maintain attendance and now they did not have to.

It is also possible that there is indeed no such large variation because the people who did show large attendance only logged in and out at appointed times but did not otherwise really attend.

DISCUSSION

As soon as the epidemic began in Wuhan, the world was in shock and the news spread fast enough to scare everyone. Most importantly, it broke the pride of healthcare sector in every single country. This unforeseen circumstance and the amount of acceptance it took from general population to be courageous enough to act accordingly shifted the paradigm of every individual's living standard. For the educationist, it became a nightmare.

An over day sudden shift to unexplored territory of digital education had taken educationists aback for multiple reasons. These very reasons became the aim behind this study and resulted in realizing how digital education is affecting students and faculty.

Taking the unfortunate events of COVID and the obstacles it presented, in due course, left educationists no other choice than to modernize the current methods in their efforts to renovate education systems strategically. The tactics that were subsequently adopted presented with some promising results and some that needed change. Hence to address a dynamically changing online practice the students and faculty from CMH LMC was approached to provide their feedback to address the limitations that occurred.

The pandemic brought opportunities for the technological aspirants. As soon as a shift to online was deemed essential, software and applications to cater this need started to come into existence, which later became a business for many. However, it was difficult for people to accept this change; these technological tools assisted in creating ease and making online shift acceptable and pace up with the need of hour. Online learning on one hand has created a possibility of remote learning for medical students, and also opened horizons for exerting efforts towards an era where Artificial Intelligence can be incorporated into the educational

system to engage and interact with students in ways that out power practical approaches. Learning is the goal, how is the simple riddle which has innovative and creative fronts. The methodology of online classes must be planned as such to be student centered in order to promote learning. Using learning analytics, teachers can gather and analyze student data and enhance the design and delivery of instruction in order to make it more relevant to them during online classes [15]. Several researches have shown on the effectiveness of online classes in different parts of the Globe during corona pandemic. With the prevalence of internet-based courses in higher education, to provide an optimal learning atmosphere, it is necessary to analyze the experiences of the students. This research showed that students who expressed optimistic attitudes towards online classes displayed supportive learner attribute [16]. It has been studied that teaching methodology is significantly related to student learning, assessment and satisfaction in each through the Web-based courses. Immediacy activities reflect attempts by teachers to lower the social gap between themselves and their students during online classes [15].

Even more so, the evaluation and assessment systems require test run and amendments after trial and application to enhance feedback system. This study also evaluates the satisfaction level of students by online evaluations or assessments by taking their feedback [14]. The data provided here tend to suggest the online courses experience problems in particular with regard to the apparent quality of such courses. It is promising by certain studies that most of the students attending online classes are satisfied with them [17]. Many of the students who live in some place where internet facilities are available considered e-learning to be a good source of learning. Although it poses a 180 degree opposite experience for students who face weak or poor internet facilities to be able to educate themselves at virtual approaches. The online teaching and learning satisfy the students observed by various higher education institutions despite few disagreements [21]. There are many factors which have been contributing to the successes of e-learning and need to be studied. Results of this study showed that most learners agree that course design, learner motivation, time management, and online technology comfort affect an online learning experience's success [18]. Despite recent advances in online medical education, the developing countries still lack excellence and needs further evaluation. It would take yet more time and experience to achieve some sort of standardization in online medical education which has approvable advances after enough evidence has supported it.

CONCLUSION

COVID 19 not only provided the world with unforeseen challenges to survive with regards to health but also opened opportunities for development, growth and integration of Artificial Intelligence in our work, learning, education, healthcare and all other major aspects of lifestyle. The need of online learning was immediately felt which not only requires constant improvement but also innovation and development to growing needs. Educational strategies and learning methodologies have not gained impetus before this pandemic presented. Hence a system that can manage teaching and learning with respect to virtual techniques so as to achieve goals and standards which can compete with the practical world is the need of hour.

Limitation

Some important limitations should be considered when interpreting the results from this study. The most important limitation is that this is not longitudinal, but a cross-sectional study. To study the Perception of Faculty and Students of all classes, regarding effectiveness of online experience, a longitudinal study would be most desirable.

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Conflict of Interest

Authors declare no conflict of interest

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