



Covid-19: Increasing effectiveness of virtual classes in undergraduate colleges of West Bengal

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Abstract

Covid-19 pandemic has forced massive changes in academic sector abruptly. Physical classroom teaching was replaced by virtual classrooms without providing any time for teachers and students to adapt to the changed realities. However, experience of e-learning, particularly in developing countries, is challenging due to a number of factors and do not have a very high success rate. Some of these challenges can be overcome by using mobile phones but greater use of mobile phones can have unintended side effects. This paper attempts to analyze past one years Experience vis-à-vis past studies regarding adaptation barriers to e-learning in developing countries.

Keywords: pandemic, e-learning, mobile phones, virtual classroom, undergraduate education

Introduction

Covid-19 pandemic has forced us to accept major changes in our life-style. The need for maintaining social distance and restrictions on movement have forced major changes in how we interact and transact. Work from home (WFH) and Video Calling have become the norm for workplaces. In order to cope with the strains of being confined to one's home due to lockdown has led to increased reliance on online entertainment and various social media platforms. Mobile phones, which had become an integral part of our life even before the pandemic, became even more important as more and more users started using internet enabled Smartphone. Covid-19's impact on society, economy and psychology has already evinced academic interest and the body of research is likely to grow in near future. Academics, particularly school and under-graduate education, has undergone major changes to cope with altered scenario. Findings of UNESCO (2020) ^[15] indicate that closure of schools and universities have impacted students in more than one way. As fear of pandemic made physical classroom teaching impossible so academic institutions have been forced to shift to virtual classrooms. Although e-learning and M-learning have been in existence for some time but the extent to which they are being used is unprecedented. Past experience regarding acceptance barriers to E-learning and M-learning leads us to believe that both students and teachers, who are not accustomed to these modes, would face considerable difficulty in adapting to such virtual classroom (Almaiah, Al-Khasawneh, & Althunibat, 2020) ^[5]. In fact in developing countries only 15% of e-learning projects are successfully implemented (Al-Araibi, Naz'ri, & Yusoff, 2019) ^[1]. Greater reliance on internet enabled mobile and other electronic devices are also known to impact psychological and social behavior of students (David & Roberts, 2021) ^[9]. In addition, developing countries have to deal with problems of affordability and accessibility. Students belonging to lower income group and residing in areas having poor internet connectivity are likely to be at a disadvantage (Biswas, Roy, & Roy, 2020) ^[7]. Thus, the pandemic's impact on school and undergraduate education is likely to have many facets. In this paper we attempt to

look at how the pandemic is likely to impact the field of academics, with particular reference to school and undergraduate education. For this purpose we rely on existing knowledge regarding acceptance barriers to e-learning, psychological and societal impact of greater use of internet enabled mobile devices, preliminary data relating to the pandemic's impact on academics in developing countries and combine them with experience as a Practitioner. The paper is divided into five sections. First we look at acceptance barriers to e-learning. This is followed by discussions on how mobile learning can overcome the barriers to e-learning. Finally we attempt to use insights gained from existing literature to examine personal experience and understanding pandemic's possible impact on academics and arrive at preliminary conclusions on ways of using e-learning in undergraduate and school education with greater success.

Adaptation Barriers to E-learning

Modern e-learning systems like Blackboard can go a long way in dealing with problems created by the COVID-19 pandemic. E-learning can enhance efficiency and efficacy of distant education by increasing access to teachers and learning materials (Idris & Osman, 2015) ^[11]. However, its success depends on students' willingness to adapt to the new learning method (Almaiah & Almulhelm, 2018) ^[3]. Studies by Almaiah and Man (2016) ^[6] in Malaysia indicates that pleasant experience, relative advantages over alternative modes of learning, perceived compatibility and relative complexity are some of the factors influencing students' decision to use a particular e-learning system. However, studies in Saudi Arabian context indicate that perceived enjoyment and social influence do not impact acceptance of e-learning (Al-Gahtani, 2016) ^[2]. Other studies identify quality of website, e-learning awareness of students and faculty, technology options and support by top management as critical factors for success of e-learning (Almaiah, Jalil, & Man, 2016) ^[6]. A number of studies show that lack of awareness among students (Al-Araibi, Naz'ri, & Yusoff, 2019) ^[1] and inadequate preparedness of Universities are powerful challenges to e-learning adaptation (Eltahir, 2019)

[10]. Studies conducted in post COVID-19 period identify preference to traditional mode of teaching and opposition to change among students and teachers as important barriers to large scale acceptance of e-learning (Almaiah, Al-Khasawneh, & Althunibat, 2020) [5]. The above discussion shows that although e-learning has the potential to mitigate COVID-19's adverse impact on academics but its success is subject to numerous constraints. Nature of these barriers is such that it is reasonable to expect that stakeholders did not have adequate time to adjust to the new learning method.

Attractiveness of Smart Phones for E-learning

Low penetration of computers and relative affordability of mobile phones makes mobile phones more feasible for e-learning in developing countries. It is particularly attractive because it is ubiquitous, portable and facilitates collaboration and interaction (Ozdamli & Cavus, 2011) [13]. These features make anytime, anywhere teaching possible. Some studies show that more than 80% students are satisfied with using mobile devices as a learning tool (Dashti & Aldashti, 2015) [8]. Studies conducted long before COVID-19 outbreak reveal high degree of acceptance on mobile phones for educational purpose among both school going children and teachers (Valderrama & Schmidt, 2010) [16]. Chinese studies show that access to instructor's instructions and educational material increases by using mobile phones for higher education (Xu, *et al.*, 2019) [17]. Thus, mobile phone has the potential to overcome some of the barriers to acceptance of e-learning in COVID-19 era. Apart from being the venue for imparting education, classrooms also provided the opportunity for social interactions. However, with introduction of e-learning, emphasis on social distancing and restrictions on movement the opportunity for face to face interaction has diminished sharply. Studies during COVID-19 pandemic show that 25% of persons falling in the 18 – 29 age-group suffers from significant psychological distress (McGinty, Presskreiser, Han, & Barry, 2020) [12]. It is also known that greater use of mobile phones can cause alienation from surroundings (Roberts & David, 2016) [14]. In such case, will greater use of mobile phones have any adverse effect on students? Recent studies show that mobile phones actually mitigate the negative effects of social distancing and greater mobile phone usage is related to psychological well-being (David & Roberts, 2021) [9]. Thus, mobile phones not only have the potential to overcome the challenges faced by e-learning but it can also act as the vehicle for remaining socially connected while remaining physically distant.

Discussion

A recent study in Bangladesh show that the overwhelming majority of University students consider mobile phones as a learning companion, more than 80% of students opine that it is easier to find relevant information with mobile. Interestingly, more than 73% of students feel that using social media applications helps in educational fulfillment during COVID-19 era (Biswas, Roy, & Roy, 2020) [7]. The author being a teaching faculty in an undergraduate college in peri-urban area of Kolkata has been taking online classes since outbreak of the pandemic. Online classes started abruptly due to suspension of physical class room teaching. Since large number of colleges is affiliated under one University so there was no change in course content and mode of evaluation. Physical teaching was replaced by

online classes. Centralized examination was replaced by students writing the answers from their home and submitting answer scripts through email. Neither the teachers nor students were accustomed to the new medium of instructions. Classes were mainly held through video conferencing apps like Google Meet and Zoom. Classes were mainly in the form of lectures supplanted by lecture notes. The experience of the past 1 year shows some interesting aspects of shifting from physical class room to virtual class room. Although most students do not belong to affluent families but availability of mobile phones and internet is not a problem. At the time of commencement of online classes there was considerable enthusiasm among students and number of students joining online class was more than the attendance in physical class rooms. However, with progress of time the enthusiasm declined and attendance fell below attendance in physical class room. There is also a significant difference between behavior of students who joined college before onset of pandemic and students who joined college during pandemic. Proportion of students attending online classes was significantly high for older students compare to new students who joined during pandemic. A number of factors may be responsible for the above observations. Declining attendance among older students with passage of time can be explained by three factors. The initial enthusiasm of something new decreased after some time as they got used to the new mode of teaching. Declining employment due to pandemic has forced many students to take up part-time employment. Switching over to online exams where there is no surveillance is also partly responsible for declining participation. Students admitted before pandemic had attended physical class rooms and got to know each other as well as the teaching faculty. However, students admitted during the pandemic never had a face to face interaction among themselves or with the teaching faculty. The new students do not have any psychological bonding with classmates and teachers. Moreover, since they are aware of the evaluation methodology at the time of admission so, attending online classes is not a priority and they are more interested in getting lecture notes. With all colleges switching to online classes, availability of lecture notes is not a problem. Thus, there is no incentive for attending online classes. There are also issues relating to how we migrated to the new system. The teachers did not have any experience in taking online classes. So, they simply replaced physical class with virtual class without any change in teaching style and methods. Lectures and class notes remained the mode of instruction. As a result, neither the teachers nor students had adequate interest in the new system. The University also did not react adequately to altered scenario. The syllabus and mode of examination did not change. No content for online classes was developed. Evaluation method involving short and surprise quiz where the faculty creates a short quiz involving multiple choice questions will not only help in periodic evaluation but will also help in increasing participation. The sum total of marks obtained in quiz should have a significant weight in overall evaluation.

Introducing collaborative project / assignments involving small group of students will not only help in better understanding but will also facilitate interaction among students. Since it may not be feasible or cost effective for individual colleges to have such facilities, the University

should provide the platform to teachers and students for participate in the new evaluation system.

Conclusion

Authors experience shows that issues impacting success of online classes during the pandemic are different from those identified during pre-pandemic times. Prior history of physical interaction became a key issue which was not the case earlier. Since shift to online mode was not accompanied by development of new course content and mode of evaluation so, interest among students and teachers declined with time. This leads the author to believe that developing new course materials centrally and imparting basic training to faculty could have resulted in greater participation. Similarly, online test held at a specific time and involving multiple choice questions could have reduced dependence on lecture notes and generated greater interest among students. Orientation session with small batches of new students organized over a period of time and maintaining physical distancing norms could have resulted in greater familiarity students and teachers. However, these are preliminary findings and needs to be followed up by quantitative techniques like survey and structure questionnaire involving students and teachers from various disciplines and involving different educational institutions.

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