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ASSESSMENT OF DISTANCE LEARNING MODES FOR TERTIARY EDUCATION IN PAKISTAN

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ABSTRACT

In this study, two modes of communication for distance learning are discussed -Broadcast Media Technologies (one-to-many) and Communicative Media Technologies (many-to-many). In addition, the study sheds light on Synchronous Versus Asynchronous modes of communication. Further, the study evaluates the effectiveness of Digi skills' (an initiative by the government of Pakistan for Information Technology courses) mode of communication and its possibilities of deploying the same in tertiary education in Pakistan. For the accessibility, affordability and acquaintance with tools and software, this research has conducted a survey through Google forms in order to assess an availability of internet connectivity and availability of devices for distance learning amongst Students. Finally, the researcher proposes a Hybrid Solution for distance education for tertiary Education in Pakistan.

KEYWORDS

Distance Learning, Hybrid Modes of learning, HyFlex mode of learning, synchronous and asynchronous modes of learning.

1. INTRODUCTION

The recent trend of online learning has increased due to COVID-19 pandemic that has caused a massive disruption in the academic field. To cope with the situation universities shifted to electronic learning (e-learning) which has affected universities, instructors and understudies at all levels. The quantity of schools and colleges around the world, giving distance learning programs has risen emphatically and numerous nations have seen an increase in distance learning. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) announced that more than 1.37 billion understudies (80% of the worldwide understudy populace) have been impacted by the emergency. The interruptions have constrained learners to migrate from actual school grounds and adjust to new internet based instructive settings. Hence, to provide alternative solutions several software houses and Edu-Tech companies tried to impart uninterrupted education. Consequently, digital learning tools are in high demand.

Adegbija, Fakomogbon, & Adebayo (2013) claimed that institutions where teachers are completely naive about the technological modes and lack of training towards basic understanding of frameworks like Technology Pedagogy Content and Knowledge (TPACK). Consequently, leads in poor lecture delivery and resulted in incomplete attainment of desired learning outcomes. Nevertheless, videoconferencing and online discussion forums and social media are examples of communicative technologies. This educational communicative media allows interaction between learners and teachers, and perhaps creates even more significant learning impact on a learner, without the participants needing to be present in the same place. In addition to this, there are two main types of distance learning: synchronous and asynchronous. Synchronous mode of distance learning requires all those participating in the communication to participate together, at the same time, but not importantly in the same place. Videoconferencing tools such as, Zoom Meeting, Skype, and MS Teams and webinars are examples of a synchronous mode of interaction. On the other hand, asynchronous Mode of

learning enables members to access information or communicates at different time zones, usually at the time and place of choice of the participant. Broadcast mode and all recorded media are asynchronous (such as YouTube videos). Similarly, Learning Management Systems (LMS); a vital software platform enables educator and trainers to deliver, create, and manage educational content; thus, providing the alternative approach to internet connectivity issues, lack of proper online communication discussions and lack of availability of LMS. More than 70,000 universities, corporations and schools in over 200 countries and 100 different languages are utilising learning management systems for improving educational outcomes for students. Yet, a majority of institutes in Pakistan still use conventional methods without realizing the changes taking place around them. Moodle is a free online LMS that allows educators creating grading systems, securing content, tracking attendance, creating quizzes, and maintaining a platform with a wealth of instructional material that connects students to critical educational resources. It aids teachers in providing better education to students and allows students to learn more quickly while staying on top of their schoolwork and extracurricular activities. LMS has become an essential part of academic activity in Europe and the United States. Pakistan, on the other hand, is far behind in this regard.

Pakistan - a developing country - is also fostering its field of information technology. Recently, Ministry of Information Technology Government of Pakistan jointly with Virtual University started e-learning program: Digi Skills, for the youth of Pakistan. The program offered various courses of 12 weeks duration: Digital Marketing, E-commerce Management, Freelancing and so forth. Trainees were equipped with the latest skills in various fields of information technology. As a result, Pakistani youth would use their learned skills and earn by working virtually. The Digi Skills Mode of learning is an asynchronous mode in which learner's watches the video uploaded on LMS and the Communication between instructor and students takes place in same platform and each communicate as per their availability, ease and accessibility to the internet. This approach is names as Hyflex (Hybrid Flexible) which is a combination of hybrid and flexible modes of distance learning. This method integrates physical, virtual and face to face interaction in the online learning. The program has an efficient way of assessing the trainees through quiz and hands-on-exercise. This will help the under-resourced youth by exposing them to a greater world of technology. In Pakistan, most students pursuing higher education have access to the internet for social purposes. LMSs can easily be used to turn things around for both teachers and students if adequately implemented. Therefore, the current study aims at assessing the modes of learning using HyFlex model for tertiary education in Pakistan.

2. LITERATURE REVIEW

Smallhorn, et al., (2015) revealed that learning management systems might be critical for efficient management. Few campuses utilized open-source software which facilitates teachers and students in maintaining the various tasks. This Moodle-based system relieves students stress by producing speedy, accurate results. For instance; Erfurt University has 5,000+ students enrolled on average for an academic year, while an ordinary department employs no more than 10 people in the management and 10 in the faculty. That is how technology helps managing academic life of students and teachers. However, Bates (2019) claimed that lecture capture recordings may be less effective than an online course incorporating collaborative learning and online discussion forums. Interaction is considered crucial to learning experiences in the constructivist learning perspective. Learning in a group, is an integrated approach for students to get experience with collaboration and improve skills in knowledge co-construction.

Adegbija, et al., (2013) revealed the importance of Open Distance Learning (ODL) and its synchronization with ICT tools. Literature shed light on the significance of broadcast communication model (television and radio) particularity the use of broadcast in the historical perspective of BBC in Nigeria. In 1932, BBC started its first radio broadcast subsequent started its first education program in West Africa. Moreover, in 1957, Nigeria broadcast service started education programs. In the initial years, TV was limited only to primary, secondary and teacher training. However, with the help of the UNESCO institution of education, university of Ibadan in 1962 established the first audio-visual system. Onwards, tertiary education started to begin and implemented two modes of leaning namely open and distance learning. These terms are interrelated. Basically, this broadcast mode is self-pace learning mode where learners are responsible for their learning activities. Nonetheless, the observations of United Nations Educational, Scientific and Cultural Organization (UNESCO) the inequality between developing and developed digital divides pointed out the challenges. Few of them are

campus radio or other TV stations do not have proper education broadcaster, instructional designers, scriptwriter for ODL (Open and Distance Learning) programs. Laboratories need to be redeveloped according to the guided enquiry so that learning outcomes can be analyzed.

Wahab et al (2021) stated that technology which best fits in the in the pedagogical approach in the classrooms nourished students learning. Streaming digital video on demand increased math achievement scores statistically significantly. Such educational programs facilities learners with better reading skills, higher visual processing and spatial perceptual skills, increased knowledge of critical thinking about a particular issue are all part of the cognitive domain, and there is plenty of research on how video can help with mental growth and academic achievement. Moreover, the integration of Edu domain can be deemed through the example of Substitution, Augmentation, Modification, Redefinition (SMAR) model which can be resulted as a ladder to improve students learning from basic to advance level of learning difficulties. At the substitution level, lecture may ask the outcomes of replacing a certain task with technology. For the augmentation level, the question which arises is about new features that technology can provide. Moreover, at the modification level, they may ask about the changeability of task with the integration of technology. Lastly, at redefinition, they may ask if the technology can help in achieving the inconceivable tasks. In conclusion, SMAR model does not work as magic bullet rather it does replace scaffolding approach. In a way, the access to learning anywhere and anytime, time and money-saving and offering flexibility. However, there is a limitations of distance learning include distraction, technology awareness, and the less communication between instructor and student. In-addition, Moodle platform for uploading resources highlights the right set of limitations and advantages that can be considered while conducting research on distance learning. Therefore, blend of both tools should be used in learning. Moreover, the dynamics of online discourse and pedagogical techniques in cyberspace implies all communication that shared ground of information facilitates the holistic approach of learning.

3. RESEARCH METHODOLOGY

A comparative assessment survey was conducted on Google forms in order to assess the availability of access to digital tools, reliable internet access, connectivity issues, intermittent power outages and acquaintance with communication software. The survey was conducted from two public universities in Pakistan namely Shaikh Ayaz University Shikarpur (SAUS), Sindh and PAF-IAST (Pak-Austria Fachhochschule- Institute of Applied Science and Technology) Haripur, KP (Khyber Pakhtunkhwa). Both of the universities are located in the rural areas of the two provinces. The aim behind selecting these universities was to examine the ground realities of the educational institutes situated in the far-flung areas of the urban centers. The total number of responses collected was 750. The questionnaire designed was closed ended. The research has also observed the model used by Digi Skill in teaching various digital skills.

4. DATA VISUALIZATION AND ANALYSIS

A statistical tool was used to analyze data collected in the survey. The data was presented in the form of pie and bar charts that made easier to analyze statistically. The readiness assessment survey had four questions. The finding of each posed survey questions is sequentially represented in the following section. The first question was on inquiring the reliable access to the internet. To the question on availability of internet, the responses showed that 72.1% students have Wi-Fi from PAF-IAST (Pak-Austria Fachhochschule: Institute of Applied Science and Technology) whereas 34% from SAUS claims to have Wi-Fi. The results of Figure 1 showed similarity between both universities.

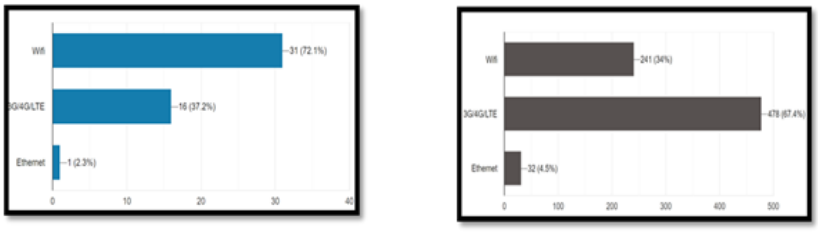

Figure 1. Access to Internet

Secondly survey question was related to difficulty faced during internet connectivity. The students were asked if they have used various communication softwares for online education. The results showed that PAF-IAST (Pak-Austria Fachhochschule: Institute of Applied Science and Technology) students were more familiar with MS Teams however; SAUS students were more familiar with Skype.

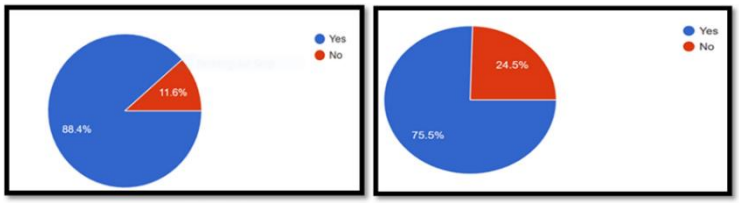

Figure 2. Internet connectivity issues

To the question on readiness for online classes, students were asked to inform regarding their opining on online classes. The results showed that students from both universities were not ready for online education.

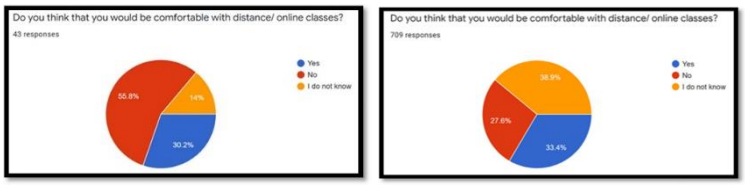

Figure 3. Usage of softwares

Lastly, their expertise in operating computer was inquired. The data from the survey shows the differences and similarities between the two universities. One is equipped with the latest instructional technologies of smart classroom (PAF-IAST) and the other one has traditional classrooms without any instructional technologies (SAUS). The result from both universities showed that the students were not ready and satisfied with the complete transition from face to face to online classes. The reasons for dissatisfaction found through the survey were electricity power outages, internet connectivity issues, access to the internet and so forth.

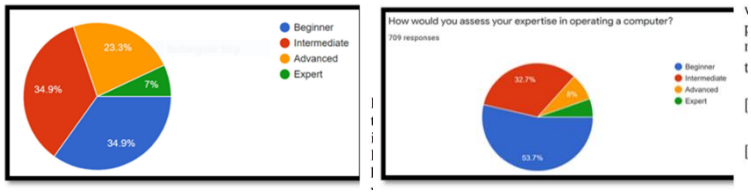

Figure 4. Expertise in operating a computer

5. CONCLUSION AND RECOMMENDATIONS

Considering the results gathered from the survey, this research proposes that aggregation of Broadcast and Communicative mode for online or distance learning is superlative communicative platform for online learning. This study has discussed the two modes of technologies in distance learning; broadcast media and communicative media. The effectiveness of Digi skills mode of technology is considered as the solution to tertiary education problems in Pakistan. The mere limitation of current study is data is collected for two universities in Pakistan and future studies could extend the sample. Moreover, the current trends practiced in the distance learning in Pakistani universities could also be explored. Moreover, due to the unfortunate Covid-19 pandemic, teaching and learning modes have witnessed a drastic transition from the traditional classroom to distance learning. Higher education in Pakistan is in the process of transitioning the new modes of earning and teaching. Higher Education Commission (HEC) has been deliberating on designing instructional technologies with the inclusion of smart classroom facilities. This research benefits the country's higher education sector with the proposed hybrid mode of learning. The suggested hybrid mode should address the needs of learners in terms of access o content, lectures and assessment.

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