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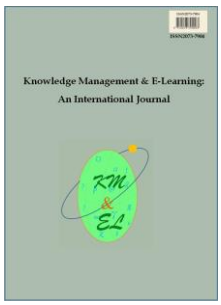

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Student perceptions of knowledge management and institutional readiness for online classes amid Covid-19 pandemic

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Abstract: Higher education has undergone substantial digital change due to the impacts of the COVID-19 pandemic, which altered the status quo in education. Universities across the globe have initiated and adapted various course delivery modes to mitigate this unprecedented situation. Among these responses, online classes continue to be the most common. Therefore, this study examines institutional knowledge management and readiness to sustain online course delivery. Adopting a qualitative research design, this study used two methods, semi-structured interviews (n15) and online open questionnaires (n42), to gather data. Reflexive thematic analysis was then used to analyse the data. The study findings underline that the adaptability, flexibility, and approachability of the virtual learning experience are critical to determining an institution's readiness for online classes. Based on student perceptions, the faculties of digital skills, integration of innovative pedagogies, student readiness, skills and experience, and integration of learning resources are the main aspects that determine the readiness of universities for online learning.

Keywords: Covid-19; Thematic analysis; Virtual learning; Competency; Digital skills; Innovative pedagogies

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1. Introduction

The COVID-19 pandemic and the associated lockdowns necessitated substantial changes to the instructional environment of higher education institutions. Traditional universities offered several options for pedagogical practice before the implementation of COVID-19, including a wide range of course delivery techniques such as online, hybrid, and recorded classes. These have also resulted in the development of new aspects of educational innovation via the use of digital interventions. However, the emergency lockdown measures enforced by the majority of nations in 2020 during the COVID-19 pandemic significantly influenced all aspects of work and social contact, including an educational environment still primarily dependent on in-person courses. Traditional higher education institutions were forced to transition from a teaching model reliant on in-person interactions to one conducted almost entirely online (Cranfield et al., 2021).

After migrating all services to digital platforms, an 'emergency eLearning' phase ensued in the wake of the rapid lockdown. The full effects of such a sudden move to digital media on all generations of higher education students remain unclear (García-Morales et al., 2021). The reality of the new normal, disturbed by COVID-19, has resulted in a profound restructuring of education and training, with global higher education among the sectors most dramatically impacted by a rapid digital transition (Dwivedi et al., 2020). Hence, some disturbance to the typical student learning experience has been inevitable, particularly for those students who attended conventional institutions. The severity of such disruption differed based on the region in which the university was located and the lockdown procedures used in that nation. Many institutions have continued to offer alternative courses even after lifting pandemic restrictions. Indeed, this can be considered a significant shift in the higher education sector regarding flexibility and adaptability (Muthuprasad et al., 2021).

Across the world, Higher Education has been grossly impacted by the fatal spread of COVID-19 that, in turn, triggered substantial disruptions and deviations for intact academics globally. It has altered its TLE (Teaching, Learning & Evaluation). Further, COVID – 19 brought in front the constraints of the so-called "system" of "Higher Education" (Rashid and Yadav, 2020). It accentuated the necessity of intensive training of educators/tutors in digitalised technological advances to acclimatise to the swiftly shifting educational situation in the world (Saidu and Al Mamun, 2022). During the pandemic, the transition to online teaching and learning remained stressful for students and other stakeholders (Chakraborty et al., 2021; Debbarma and Durai, 2021). It is worth noting that the university administration's psychological suffering remained less supported (Lischer et al., 2021).

Given this rapidly shifting landscape and ongoing adjustments within higher education, addressing student perceptions of knowledge management and institutional readiness regarding online or hybrid learning is vital. However, only a few studies have yet examined student perceptions of institutions' online learning readiness as an ongoing course delivery technique (Khan et al., 2020). Therefore, this study aimed to address the following research sub-questions in the context of the COVID-19 pandemic.

1. What are students' perceptions of institutions' ability to educate students in the setting of entirely online learning?

2. How do students view their own abilities to acquire and integrate course material in the setting of entirely virtual classrooms?

3. How do students feel about using eLearning platforms for entirely digital learning?

2. Literature review

This study differs from previous research as, it is, to the researchers' best knowledge, the first study that explores students' perceptions of institutional readiness for online learning during the COVID-19 pandemic using two methods, semi-structured interviews and online open questionnaires to gather data, along with it, reflexive thematic analysis was then used to analyse the data. Second, because this study is not restricted to any one university or universities, it has gained a larger viewpoint in studying the issue being investigated.

2.1. Institutions' ability

The digital transition of TLE encompasses ongoing prevailing tasks and, at the same time, comprehending and assimilating innovative practices. Such endeavours were challenging for educators who did not have customised space at home to teach with other assigned assignments (Littlejohn et al., 2021). Various scholars showed that when it came to online education, higher education teachers and students had many of the same challenges (such as lack of access to digital equipment and software) and advantages (like flexible scheduling and time arrangements) (Weldon et al., 2021). The situation remained grave in disadvantaged universities and rural communities. The lack of information and communication technology (ICT) devices and network connectivity problems are the main reasons to access or not access online learning (Mailizar et al., 2021). Students and teachers are impacted significantly by the technological challenges during the pandemic. This pandemic posed a big question about the quality of education, especially in countries where neither the government nor institutions have taken active steps to keep students learning (Mengistie, 2021). During this pandemic, the instructional method exercised by tutors/teachers was/was least imperative, but its enactment for students was/is more vital (Gillis and Krull, 2020).

Iglesias-Pradas et al. (2021) supported the notion that structural aspects might add to the efficacious enactment of remote teaching in distance mode and that on priority. Although Akhter et al. (2022) acknowledged four foremost blocks, 1) fiscal, 2) scarce institutional sustenance, 3) technical, and 4) individual, that strengthens reluctance to online improvement at the university level in the milieu of Bangladesh. The finding confirmed that technical and scarce institutional assistance is noteworthy. At the same time, fiscal and individual have been exposed as non-significant to deepen learners' disinclination to online education.

Jusas et al., (2021) developed models to overcome challenges faced by the administration of higher education institutions due to the Covid crisis, which are rooted in five core procedures of instructional strategy, 1) investigation, 2) plan, 3) progress, 4) execution, and 5) assessment. In analogous research, Radu et al., (2020) emphasised that maximum learners were contented with the university's actions throughout the lockdown and by the modus-operandi of TLE (Teaching, Learning & Evaluation). However, a few adverse facets were testified like an inadequate set-up for a few learners, unsuccessful teacher-student communiqué and collaboration, hurdles in the performance of practicals, various applications, less sociability, poor academic encouragement, unsatisfactory & faulty exam modes, chances of physiological and psychological dilapidation. This survey was conducted at "Vasile Alecsandri" University of Bacau, Romania.

2.2. Students' perceptions

Since perception and attitude are critical toward the success of the online leaning, early researchers have provided some fundamental insights into the students' perceptions and expectations of online learning (Laili and Nashir, 2021; Guspatni, 2018; Muthuprasad et al., 2021).

Numerous studies exploring students' perceptions and expectations of online learning have been published recently, but it is still unclear how these various stakeholders' perceptions may differ and influence one another, as well as how individual perceptions are formed as a result of various factors. Agung and Surtikanti (2020) presented that "Perception is the knowledge of an item, an event, or a connection that is gained through the summarization and interpretation of information". Benaraba et al. (2022) revealed that "The concept of perception refers to being aware, having comprehension, and understanding of something". Natalya Emelyanova and Elena Voronina (2017) showed a discernible change in students' opinions and attitudes about embracing blended learning. Students' positive perception of e-learning is well documented (Ibrahim, 2021), and some results confirmed that online learning is enjoyable for students (Bączek et al., 2021). The advantages of online learning are the capability to be at home, continued access to online resources, education at your pace, and comfortable environs (Bączek et al., 2021). However, online education also negatively impacts students' mental health and causes higher anxiety and stress levels (Gillis and Krull, 2020). In a similar study, Jumareng et al. (2021) indicated that in a survey conducted at Suryakancana and Halu Oleo University, most respondents' perceptions admit that online learning is better, engaging, easy to access at any time and more effective than face-to-face learning. Khalil et al. (2020), exploring medical students' perspectives in Saudi Arabia, found that the online modality was well-received, saved time and the outcome was upgraded owing to the heightened usefulness of saved time; nevertheless, they specified that they came across a few hurdles like pedagogical, discernment of content, technological as well as behavioural all through online teachings & examination.

Moreover, Tüchler (2021) emphasised, in a study by Latvian higher education institute, that impetus and active collaborative interfaces are crucial aspects pertaining to students' discernments & attitudes toward distance learning. In two studies (Meccawy et al., 2021; Yau et al., 2022), it was observed that students of Saudi universities and two Hong Kong higher education institutions had a more positive perception of e-Learning than teachers of these universities. In a study conducted at Jordanian universities, face-to-face learning remains the preferred method of academic knowledge, followed by blended and e-learning (Al-Harazneh et al., 2022). Finlay et al. (2022) documented that blended learning generated consistently higher satisfaction rates when all students were considered during the pandemic in UK universities. In a similar study, ANG et al. (2021) revealed that the convenience and superiority of the online structure was a critical aspect that impacted the learners' "apparent worth and seeming comfort" of the usage of the online study. Likewise, Humida et al. (2021) found that "apparent worth and seeming comfort" and "enabling state" have substantial effects on envisaging behavioural intent in using e-learning at Begum Rokeya University, Bangladesh.

Kharma (2019), using the SEM approach and SmartPLS, comprehended that effort anticipation, individual (societal) customs, price, and consciousness of online program accessibility impact behaviour patterns in online programs. The work was conducted at Al-Ahliyya Amman University. Ghosh et al. (2022) acknowledged that practicality, inspiration, the answer to the lengthy question, appropriateness of chosen

time, and comfort of performance are why Indian Medical Students favoured in-person assessment over online. Nevertheless, they preferred Online Assessment (OA) regarding exam nervousness, examiner prejudice, and the answer to MCQs. The unavailability of an improved net connection was the foremost difficulty. Weerathunga et al. (2021) indicated, in a study conducted for university students in Sri Lanka, that mindset for online education and apparent comfort of usage developed as crucial aspects in the elucidation of behavioural intent. Sason et al. (2022) exhibited that learners had meaningfully advanced hopes for tutors' technological and sentimental mindset that was quite different before COVID-19.

Nevertheless, learners had lesser hopes vis-à-vis tutors' specific role in crises and analogous prospects for tutors' instructive part in both circumstances. Zeng (2020), by using the partial least square technique to test, recommended that apparent practicality, individual customs, enabling environments and personal worth are the substantial aspects of Chinese college learners' online learning reception. Benaraba et al. (2022) documented that during COVID-19, students of Tourism Management at Far Eastern University Manila, Philippines, were concerned about their job prospects in the tourism industry. Pavin Ivanec (2022) stated that students who spot more deficiencies in academic and societal relations account for more erudition and self-regulation complications during online studying. This study was conducted for university students in Croatia. Ho et al. (2021), the results of the structural model, elucidated that the social factor (SF) unswervingly impacts the learners' attitudes (ATT) of Vietnamese university students. Cui et al. (2021) investigated the behaviour patterns of elementary school pupils along with their guardians (2 generations from the identical family) toward online education in China throughout COVID-19 stressed the subsequent six-core concerns that guardians were worried about: (1) dissatisfaction concerning apt collaboration in programs of study; (2) trepidation for learners' comprehension of the content; (3) augmented a load of irritating mature tasks; (4) worry for kids' vision; (5) the notion that tutors' elucidations were not exhaustive; and (6) worries about the declining students' concentration toward online programs. Baki et al. (2021), in a study conducted in 9 state universities in Turkey, displayed that Communication, Compatibility and Time Efficacy have optimistic outcomes on user fulfilment and intent to use via Apparent Practicality; Self Usefulness, Individual Standard and Delight have no impact, Structural Equation Modelling (SEM) was used to analyse data. Contrary to these outcomes, Lorio et al. (2021) identified a disconnect between student perceptions of learning and actual learning outcomes in online education.

2.3. Readiness

It has been and will continue to be necessary for educators and learners to re-examine their preparation because online learning has grown popularity in educational institutions. Over the past few years, research has focused on developing a readiness scale for online learning (Hung et al., 2010, p. 1080). Readiness is described in terms of the organizational members' beliefs, attitudes and intentions and it should be distinguished from resistance to change (Armenakis, Harris and Mossholder, 1993). Organizational readiness for change is a multi-level, multi-faceted construct (Weiner, 2009). Shea et al. (2014) discussed that organizational readiness as "the extent to which organizational members are psychologically and behaviorally prepared to implement organizational change". Readiness for change refers to "organizational members' shared resolve to implement a change (change commitment) and shared belief in their collective capability to do so (change efficacy)" (Weiner, 2009). Ogbodoakum et al. (2022) revealed that the

preparedness of faculty members to accept online learning platforms was significantly influenced by factors including management support, online content readiness, and perceived benefits.

3. Aspects impacting the “value” of “knowledge management"

Research scholars have identified numerous aspects impacting the value of knowledge management. Individual experience, access to technology, facilities and training are the significant factors affecting e-learning (Othman Abdullah and Mahmood Abdulla, 2021), self-efficacy, enjoyment, and computer anxiety (Kim, Yoon and Kim, 2021), sense of pleasure and purpose of self-efficacy of the online learning (Cicha et al., 2021), apparent comfort of usage, practicality, liveliness, and solidification university assistance are supportive optimising learners’ involvement intent in online education (Wang et al., 2021), the perceived usefulness (Ejdys, 2021). Also, a Virtual Community of Practice (CoP) can assist in maintaining teaching quality at a given time (Tham et al., 2022).

Bhati and Arya (2020), a unique optimistic collaboration was instituted amid Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), and both had a robust and promising impact on learners’ e-learning Usage Intention (UI). Dagiene et al. (2022) highlighted that quality of organisations and amenities, set-up and system superiority, the value of programs and information, and the online learning atmosphere are the aspects that impact the outcome of online education throughout COVID-19 in higher education at one of the European Union countries, Lithuania. Except for perception, several elements of ICT have a favourable impact on e-learning efficacy (Amin et al., 2022). Sources, staff willingness, assurance, student convenience and enthusiasm play an imperative role in ICT-integrated learning (Ali, 2020). Students’ contentment has a straight impact on behavioural intent. In contrast, other variables such as tutor features, simulated classroom quality, apparent self-efficacy, apparent structural sustenance, apparent comfort of usage and obvious practicality have ancillary consequences on behavioural intent to use virtual classrooms (Alrousan et al., 2022), students’ satisfaction with e-learning (Keržič et al., 2021).

Alshaboul et al. (2021) aspects like nation, age, sex, domain specification, years of experience in the course, and several online training programs before COVID-19 are proven to root statistically minor alterations in tutors’ and learners’ willingness. This study was conducted to evaluate the preparation of Higher Education instructors and students and the obstacles posed by the change to remote education in two Arab nations, Qatar and Jordan. Rizun and Strzelecki (2020) exhibited that the finest prognosticator of learners’ acceptance of altering education to remoteness is Delight, trailed by Self-Efficacy for education institutes in Poland. The challenges of online education are also well-documented by various research scholars. These challenges include poor network, which leads to poor communication between students and teachers (Debbarma and Durai, 2021), technical problems (Alcalde Peñalver and García Laborda, 2021), assessment due to suspicion of unethical behaviour (Vega Hernández et al., 2020), resources (Flores et al., 2022), stress for the students (Chakraborty et al., 2021; Hung et al., 2021; Lischer, Safi and Dickson, 2021). Likewise, Kamysbayeva et al. (2021) established that online TLE (Teaching, Learning & Evaluation) is an effective means to sharpen hard skills and is less impactful in upgrading soft skills.

4. Method

Due to the explorative nature of this study, qualitative methodology was found to be appropriate for investigating student perceptions of the current online learning context (Wakelin-Theron, 2021). Two methods were used to collect data. Firstly, 15 semi-structured interviews (coded as SI) were deployed to generate an in-depth understanding of the study context. Interview questions were formulated based on the research questions and literature review. Secondly, 42 online open questionnaires (coded as OOQ) were used to collect responses while avoiding in-person interactions during the COVID-19 pandemic. The flexibility and adaptivity of online qualitative surveys for addressing a wide range of research issues of interest to social researchers is a crucial advantage, as the method allows access to data ranging in focus from personal views and experiences, to processes and systems, to symbolic or meaning-making practices (Braun et al., 2021). The data collection period was from December 2021 to March 2022. Samples were selected purposively. First-year students were intentionally avoided since they had been unable to attend any in-person classes due to lockdown restrictions. Interview transcripts were generated and analysed using reflexive thematic analysis (Braun & Clarke, 2019). Compared to traditional qualitative data analysis techniques, reflexive thematic analysis allows for more 'reflective and thoughtful engagement with the data and the intuitive and thoughtful engagement with the analytic process' (Braun & Clarke, 2019).

Two authors did theme generation independently, and to confirm the trustworthiness of qualitative study (Lincoln & Guba, 1980), an external researcher cross-checked the themes generated. Finally, three main themes were turned out.

5. Findings and discussion

Students' perceptions of institutional readiness for online learning were examined through online open questionnaires and semi-structured interviews. The subsequent reflexive thematic analysis of the collected data offered comprehensive descriptions of the study context. The findings are presented below according to several identified themes and areas of commonality that focus on various aspects of student perceptions.

5.1. The virtual learning environment: adaptability, efficiency, and approachability

During the COVID-19 pandemic, universities across the globe experienced a variety of difficulties. According to the research, the most prevalent cause of concern for higher education institutions during the pandemic was the move from primarily on-site instruction to fully online instruction. Teaching efficiency and providing high-quality education were the primary considerations for implementing wide-scale online learning (Elhajjar & Yacoub, 2022). This study identifies several critical factors that determine online teaching quality. Most participants described how faculty members are essential in developing and sustaining a high-quality online education programme. For example, as one participant noted:

> *What motivates me to attend the class online is the efficiency of the professors. It is pretty different from offline, face-to-face classes. How they teach us, using activities, and their presentation skills matter. Most of my classes are 2 or 3 hours; if the professor is lecturing all the time, I feel sleepy or distracted by other things*

like surfing and chatting with friends. [SI-3, male, second-year undergraduate student]

This outcome further underlines how students expect many skills from their instructors apart from subject expertise, including presentation skills, digital skills, interactivity, creativity, and adaptability. These findings are in agreement with those of Coman et al. (2020), Jackson et al., (2010), and Watters and Adamson (2019). Presentation skills, digital abilities, and interactivity were crucial for making virtual learning meaningful for many students. The level of educational quality that a student may expect when participating in an online class is directly proportional to the degree to which the instructor can encourage and sustain student participation. As Yang and Cornelious (2005) have argued, the qualification of teachers should be a top priority when ensuring the quality of education provided via online platforms; these findings emphasise the upskilling requirements for modern academics. The level of quality that an individual receives from participating in an online class is strongly influenced by the activities undertaken by the instructor to launch and sustain student participation.

Interactivity and the introduction of various interactive learning materials are vital indicators of an institution's readiness for an effective virtual learning atmosphere. Many participants in this study expressed similar views on course interactivity:

We love the professor who does various interactive elements such as quizzes and polls in our classes. We could learn the lessons properly without any boredom or social isolation. It makes us active and energetic during the entire session, and we all are eager to grab extra points for participating activity.

This response highlights the necessary shift from the traditional teacher-centred classroom to the more student-centred virtual learning environment. Rather than straightforward lecturing, professors must facilitate information retention in a more enjoyable, digestible way to avoid the plethora of distractions available to students in online classes. If students are genuinely interested in the coursework, their participation and satisfaction will enhance their educational experience. In the words of a senior student:

I am timid to speak up in class. Still, when the professor introduced many other ways to interact, such as chats, opinion websites, activities etc., I felt more enthusiastic about participation. I never felt isolated in that class or part of the team.

Professor gave us lots of group activities, and each activity was designed in such a way to contribute to the lesson we had; group activities in Zoom break-out rooms enabled us to understand many more concepts easily and present them to the class.

The use of technology was another critical factor identified in the study findings. Even decades ago, Yang and Cornelious (2005) acknowledged that as the degree of face-to-face contact decreases in online courses, the importance of technology as the medium through which teachers conduct courses increases. As a result, online instructors often face the additional concern of determining how to employ technology effectively for educational purposes. Along with technology, learning resources and electronic platforms such as learning management systems (LMS) are also significant. Thus, how institutions upgrade their LMS in response to virtual learning becomes as important as the learning resources provided by instructors.

5.2. Student competency and adaptability towards online learning

Student readiness for online learning is a significant issue when considering knowledge management amid the COVID-19 pandemic. Student perceptions and willingness to adapt to virtual learning requirements can be influenced by various factors, including psychological, technical, and individualised characteristics. This study's results identified many constructive and destructive psychological factors that can affect student learning in an online context. On a positive note, the early years of online learning were found to enhance satisfaction among participants by providing them with 'personal space', time management skills, and enhanced learning activities. However, over time, a considerable number of online students began to experience negative impacts, including social isolation, distractions from social media, inability to concentrate, and a lack of motivation. This was especially profound among senior-level students.

5.3. Learning resources and knowledge management

Information sharing, virtual space, and LMS integration are also fundamental aspects of knowledge management. Most participants in this study noted the significance of integrating all virtual learning resources through a centralised LMS for their educational experience. In particular, the availability of recorded classes increases the value of online delivery, raising the level of proficiency, productivity, and effectiveness and the ease with which new information may be absorbed. Many factors, such as digital libraries, educational technologies, and integrated LMS platforms, were described as contributing to a positive learning experience:

> *I find online learning simple to comprehend and learn since the information is neither too challenging nor too easy, and they feel driven to complete tasks and study material. [QQC-13, male, second-year undergraduate student]*

On the other hand, the intuitiveness of learning resource management is strongly associated with students and faculty's existing digital skills, as Syauqi et al. (2020). An appropriate choice of pedagogies is crucial for addressing this issue. In particular, the fact that interactive relationships between students and professors will affect students' learning outcomes strongly impacts the efficacy of online course management.

Accessibility presents another critical element of the virtual learning experience. Accessibility for online learning describes how well course information may be accessed through a variety of devices, at a low cost, in a variety of locations and times, and via the user's own hardware and software, as well as how quickly the user can connect to an internet network and obtain institutional assistance. The findings of this study further emphasise the significance of meticulously prepared course materials and online resources. A considerable number of participants expressed their dissatisfaction in these areas:

> *Even though they have been prepared and organised, the learning materials still do not meet the expectations of the students. We expected materials suitable and compatible with the online classes. However, in most cases, a similar type of course materials with online classes is not complimentary. [QQC-17, male, fourth-year undergraduate student]*

Innovative online learning resources allow instructors and institutions to create a more effective and beneficial learning experience than traditional lecture notes. Furthermore, integrating these materials into existing LMS facilitates student ease with

the coursework and learning. However, access, skills, and user experience remain areas that need additional attention and support.

6. Conclusion

This study investigated student perceptions regarding knowledge management and institutional readiness for online course delivery. For online education to be genuinely successful, the evaluation and development of teaching methods and thorough preparation of educational institutions are required. Such enhancements can be accomplished by increasing the instructor's capacity to manage learning, learning materials, and techniques in the knowledge transfer process. These results may have a variety of explanations; for example, some educators have not yet gained sufficient experience with online learning, which is reflected in student perceptions. Educational technologies enable instructors to develop better students' knowledge, attitudes, and abilities in a virtual learning environment. In particular, the fact that interactive engagements between students and faculty will affect students' learning outcomes in engaging in learning activities is critical to the success of virtual learning.

When considering knowledge management amid the COVID-19 pandemic, one of the most critical issues is whether or not students are prepared for online learning. This study's findings demonstrate that various psychological, technological, and individual characteristics impact their views on and readiness to adjust to virtual learning needs. Participants in this study identified direct (access, availability of resources, and digital skills) and indirect (willingness, minimising social distractions, feelings of isolation, and boredom) factors linked with students' readiness and engagement in the online learning environment.

Furthermore, integrating resources and knowledge management is crucial to establishing a quality learning environment. Students' perceptions of instructional material are shaped in terms of whether or not it is easy to understand and learn, whether the content is too difficult or too easy, whether or not students feel motivated to complete assignments and study material, and whether or not they have enough time to study the content, whether or not materials and presentation align with their expectations, and whether or not the material is presented in language that is simple to comprehend. The organisation and accessibility of materials, use of multimodal resources (e.g., open course wares, streaming, online forums, and educational apps), and proper integration of resources through an LMS work to determine student satisfaction and exhibit an institution's online learning readiness. To recognise these critical factors, universities must mobilise resources and focus on digitising learning processes while providing faculty, administrators, and students with specialised technological training. This study has two-fold implications. Firstly, it is beneficial for higher education institutions to understand the expectations and perceptions o students about the recent shift in course delivery. Secondly, the study findings are helpful for the course instructors to design various online/hybrid lessons. It is imperative to understand students' viewpoints about the preferred way of learning to cope with their demands and expectations as consumers.

Author Statement

The authors declare that there is no conflict of interest.

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