# The Changes in Teacher-Student Interaction and Communication in Higher Education Institutions Due to the Covid-19 Pandemic

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## Abstract

The objective of the research is to evaluate, through empirical methods, the functional relationship between educators and pupils in higher education institutions during the pandemic. The study's relevance determines the problem of two-way communication between teachers and students, negatively affecting education quality. The methodology employed in this study draws upon the valuable insights and practices of leading higher education institutions that have successfully navigated the challenges of the pandemic. Specifically, the University of Oxford serves as the focus of our investigation. To establish a reliable and effective system of communication between teachers and students, we adopt the Business Continuity Planning (BCP) method. According to the findings, distance learning models that effectively address crises and problem situations are the key focus. According to this approach, a scenario of the higher education institution's educational process is developed. It was found that the Business Continuity Planning (BCP) system of Oxford University shows the problematic situation with the organization of communications. The crux of distance education advancement centers on designing training programs using models formulated by the administration of top-tier universities. In this condition, using hybrid, virtual, personal course templates ensure the unification of teaching and learning processes. Moreover, their combination can significantly improve the interaction between students and teachers.

**Keywords:** COVID-19, communications, learning platforms, heigh education

## 1. Introduction

The Covid-19 pandemic has fundamentally altered the way education is delivered in higher education institutions. With the closure of schools and universities, educators have had to shift their focus from traditional face-to-face instruction to virtual classrooms and remote learning. This has resulted in significant changes in teacher-student interaction and communication in higher education institutions. One of the most significant changes has been the adoption of online platforms for teaching and learning. With the widespread availability of internet connectivity and access to various digital tools, educators have been able to conduct classes and communicate with students remotely. This shift has allowed for greater flexibility in scheduling and has eliminated geographic barriers, allowing students from different parts of the world to participate in courses. Another significant change has been the shift from a teacher-centered to a student-centered approach to learning. In traditional classroom-based education, the teacher is often the sole authority figure, responsible for delivering information and guiding students through the learning process. However, in virtual classrooms, students are expected to take greater responsibility for their own learning. As a result, educators have had to develop new strategies to engage students and encourage active participation in the learning process.

The Covid-19 pandemic has also led to changes in the nature of teacher-student communication. In traditional classroom-based education, communication between teachers and students is often limited to the classroom environment. However, with the adoption of online platforms, communication has become more frequent and varied. Educators are now using various tools such as email, instant messaging, and video conferencing to communicate with their students. This has allowed for more personalized communication and greater accessibility to educators. The shift to virtual learning has also resulted in changes in the way assessments are conducted. Traditional methods of assessment such as in-person exams have become challenging due to the pandemic, and educators have had to explore new ways of evaluating student learning. This has led to the adoption of new forms of assessment, such as online quizzes, essays, and projects, which can be completed remotely. Additionally, the increased use of technology in the learning process has led to the development of new tools for assessment, such as online plagiarism checkers, which can help educators ensure academic integrity in a remote learning environment.

Another significant change in teacher-student interaction and communication due to the Covid-19 pandemic has been the need for increased support for students. With the shift to virtual learning, many students have had to adjust to new ways of learning and may face additional challenges, such as limited access to technology or internet connectivity. As a result, educators have had to be more proactive in providing support to students. This may include providing additional resources, such as online tutoring or virtual office hours, to ensure that students have access to the help they need.

The changes in teacher-student interaction and communication due to the pandemic are likely to have long-term effects on higher education. The increased adoption of online platforms and technology is likely to continue beyond the pandemic, leading to a more flexible and accessible learning environment. Additionally, the shift to a student-centered approach to learning may lead to changes in the way courses are designed and delivered, with greater emphasis placed on student engagement and participation.

Thus pandemic has led to significant changes in teacher-student interaction and communication in higher education institutions. These changes have presented new challenges but have also provided opportunities for growth and innovation. As we move forward, it is essential to continue exploring new strategies and approaches to education that can enhance the learning experience for students and educators alike in the new era of remote learning.

The aim of this research is to explore the changes in teacher-student interaction and communication in higher education institutions due to the Covid-19 pandemic. Specifically, the research will examine the extent to which the pandemic has led to a shift in teaching and learning approaches, the impact of technology on teacher-student communication, and the effectiveness of support provided to students in the new virtual learning environment. The research aims to provide insights into the challenges and opportunities presented by the pandemic and inform the development of new strategies and approaches to education that can enhance the learning experience for students and educators alike.

## 2. Literature Review

The Covid-19 pandemic has brought about unprecedented changes in the way education is delivered, particularly in higher education institutions. The closure of schools and universities has necessitated a shift to virtual learning, resulting in significant changes in teacher-student interaction and communication (Robinson et al., 2023; Brunetto et al., 2022). One of the most significant changes has been the adoption of online platforms for teaching and learning. A study by Hew et al. (2020) found that educators in higher education institutions have rapidly adopted online platforms such as Zoom, Microsoft Teams, and Google Meet to deliver lectures and facilitate communication with students. The study highlighted the challenges that educators face in adapting to new technologies and the need for support to ensure effective implementation.

Another significant change has been the shift from a teacher-centered to a student-centered approach to learning (Betthäuser et al., 2023; Durand et al., 2023). A study by Koob et al., (2021) found that the pandemic has led to greater emphasis on student engagement and participation in the learning process. The study highlighted the importance of creating opportunities for interaction and collaboration between students to enhance the learning experience.

The Covid-19 pandemic has also led to changes in the nature of teacher-student communication (Ali et al., 2021; Dayal, 2023). A study by Schneider and Council (2020) found that the adoption of online platforms has led to an increase in the frequency and variety of communication between educators and students. The study highlighted the importance of personalized communication and the need for educators to be accessible and responsive to student

needs. The shift to virtual learning has also resulted in changes in the way assessments are conducted (Maatuk et. al., 2022; Szopiński and Bachnik, 2022). A study by Stradiotová et. al. (2022) found that the pandemic has led to the adoption of new forms of assessment, such as online quizzes and projects, which can be completed remotely. The study highlighted the importance of ensuring academic integrity in a remote learning environment and the need for effective tools for assessment. The Covid-19 pandemic has highlighted the importance of providing support to students in the new virtual learning environment (Barrot et. al., 2021; Zancajo et. al., 2022). A study by Lee et. al. (2022) found that many students face challenges in adapting to new technologies and may require additional support. The study highlighted the importance of providing resources such as online tutoring and virtual office hours to ensure that students have access to the help they need.

In addition to the changes in teaching and learning approaches, the literature also highlights the importance of addressing the socio-emotional needs of students during the pandemic. A study by McKeown-Moak and Beeler (2020) found that many students experience stress and anxiety related to the pandemic, which can negatively impact their academic performance. The study highlighted the importance of providing support to students, such as mental health counseling, to help them cope with the challenges of the pandemic.

Another important consideration in the new virtual learning environment is the issue of digital equity. A study by Zarei and Mohammadi (2022) found that many students in developing countries face challenges accessing technology and may be at a disadvantage in the virtual learning environment. The study highlighted the need for policies and interventions to address the digital divide and ensure that all students have access to the technology they need to succeed.

The literature also highlights the importance of effective communication between educators and students in the new virtual learning environment. A study by Bustillo and Aguilos (2022) found that effective communication is essential for building relationships between educators and students and creating a sense of community in the virtual learning environment. The study highlighted the importance of using a variety of communication channels, such as email, chat, and video conferencing, to facilitate communication and ensure that students feel supported and connected.

Finally, the literature emphasizes the need for ongoing professional development for educators to ensure effective implementation of virtual learning. A study by Leary et al. (2020) found that many educators feel unprepared for the shift to virtual learning and require additional training and support. The study highlighted the importance of providing ongoing professional development to educators to ensure that they have the skills and knowledge they need to effectively deliver virtual learning.

Thus the Covid-19 pandemic has brought about significant changes in teacher-student interaction and communication in higher education institutions. The shift to virtual learning has presented both challenges and opportunities for educators and students alike. The literature highlights the importance of addressing issues such as digital equity, socio-emotional support for students, effective communication, and ongoing professional development for educators to ensure that the virtual learning environment is effective and equitable for all students.

## 3. Methodology

Qualitative content analysis was used in this study to assess the learning model employed at Oxford University. The case method was utilized to examine official information about the university's learning models published on its website, particularly from the Centre for Teaching and Learning (Oxford University, 2021a) and Flexible and Inclusive Teaching (Oxford University, 2021b) resources. Additionally, the website provided data on the distance learning model, which includes asynchronous and synchronous learning modes. The Centre for Teaching and Learning (CTL) website also offers information on supporting teachers and providing guidance on teaching methodologies for the 2021-22 academic year. The website provides various recommendations, including advice on flexible and inclusive teaching, distance learning guidance, tips for planning and conducting hybrid study sessions, training and webinar instructions, specific suggestions for teaching during a pandemic, and guidelines for assessing students' knowledge in emergency situations. These resources demonstrate the university's commitment to adapting to the challenges of the pandemic by providing teachers with the necessary support and guidance to implement effective and inclusive learning models.

## 4. Results

Analysis of the data revealed that Oxford University has established and implemented an emergency plan that includes provisions for organizing training based on projected pandemic developments and other foreseeable or

unforeseeable factors. The plan delineates specific protocols for arranging instructional procedures, which are contingent upon the nature of the emergency. Regardless of the circumstances, the university is committed to maintaining the highest standards of education despite the impacts of the COVID-19 pandemic. As a result, on December 15, 2021, the institution entered the second phase of activity continuity, which incorporates a variety of pedagogical approaches.

Oxford University has endorsed the Flexible and Inclusive Teaching paradigm throughout the academic year of 2021-2022, which underscores the value of an elastic and comprehensive pedagogical model, prioritizing diversity and inclusivity in the teaching and learning experience. The Flexible and Inclusive Teaching paradigm recognizes that every student is unique and requires personalized learning experiences that address their individual needs. This model prioritizes the integration of technology and innovative teaching strategies to create a more engaging and effective learning experience for students.

Empirical evidence suggests that face-to-face interaction through conventional pedagogical practices remains the most efficacious and cannot be entirely or partially supplanted by non-traditional digital approaches. It suggests that universities, after the end of the pandemic, will return to face-to-face learning (using tutorials, seminars, workshops, labs, and effective and practical activities). It is also essential to restore field practice and research abroad (considering restrictions on international travel).
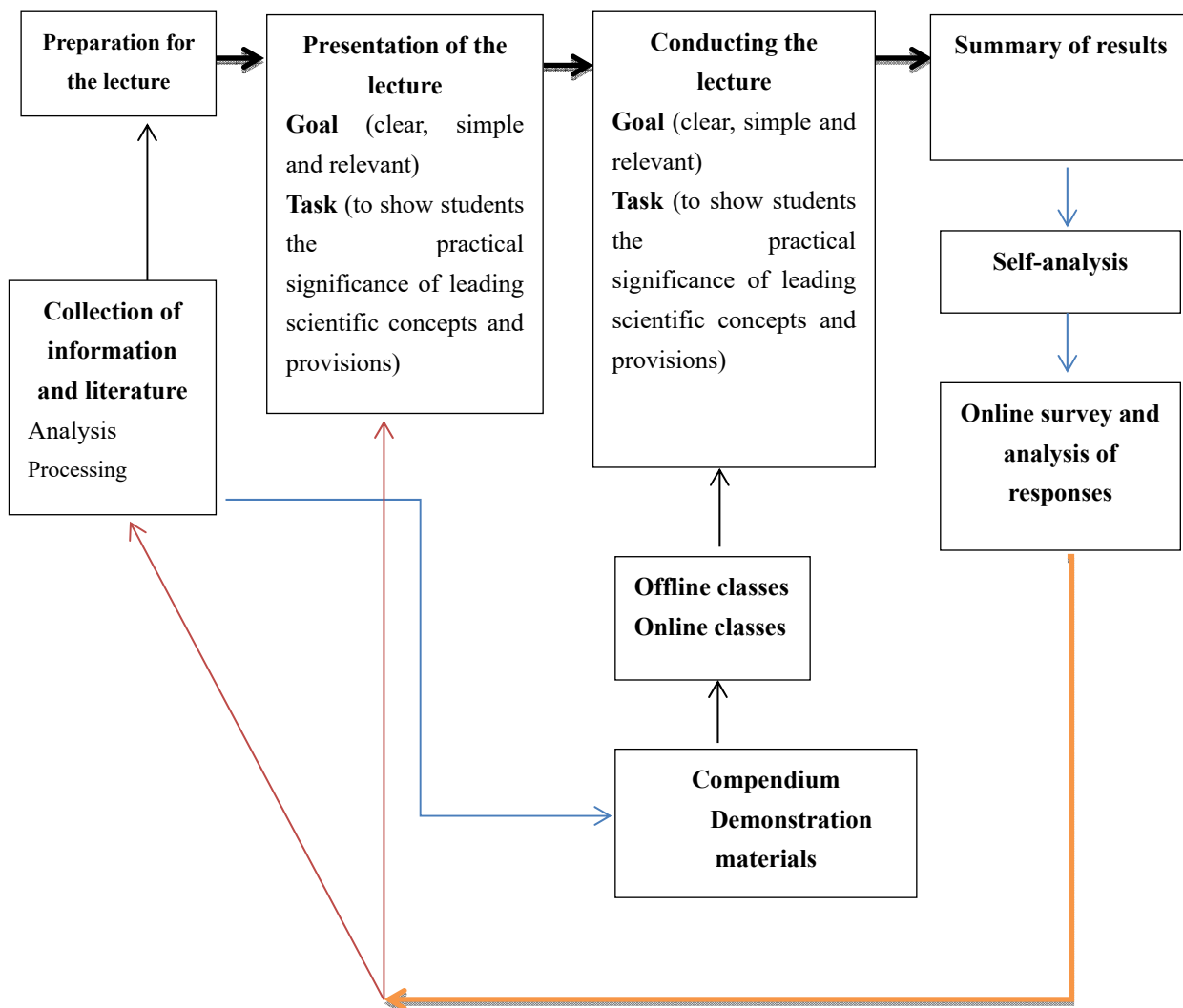


**Figure 1.** An Example of Organizing a Lecture Class in a Higher Education Institution

Source: created by authors

The Traditional Study Replacement Programme offers solutions to address the educational requirements of students who may need to self-isolate or are unable to return to the UK. In certain cases, this involves implementing a hybrid teaching format. Such programs have already been successfully used in teaching at Oxford University in the 2020-2021 academic year. The Flexible and Inclusive Teaching (FIT) program at Oxford University offered comprehensive technical and technological assistance to instructors. In addition, the competent work organization ensured the participation of stakeholders in the learning process remotely, which was as effective as usual communication. By providing comprehensive technical and technological assistance to instructors and promoting stakeholder participation in the learning process, the FIT program at Oxford University demonstrated a commitment to creating a more dynamic and inclusive approach to higher education. This approach not only helped to address the challenges posed by the Covid-19 pandemic but also promoted a more engaging and effective learning environment for students in the digital age.

Technical and technological support has emerged as a solution to address the challenge of dynamic interaction between teachers and students, particularly in the face of limited access to digital learning technologies. A unified platform was created to facilitate seamless interaction between teachers, enabling them to easily exchange experiences and troubleshoot any technology-related issues. This development has led to a positive perception of information and laid the foundation for the training platform's growth. Furthermore, in addition to utilizing digital learning technologies, all teachers also continued to deliver traditional classes such as laboratory work, lectures, and small group consultations for students. The university administration supported these traditional classes by providing scenarios for conducting teacher training courses. As a result, the implementation of technical and technological support has enhanced the quality of teaching and laid a strong foundation for future development of the training platform.
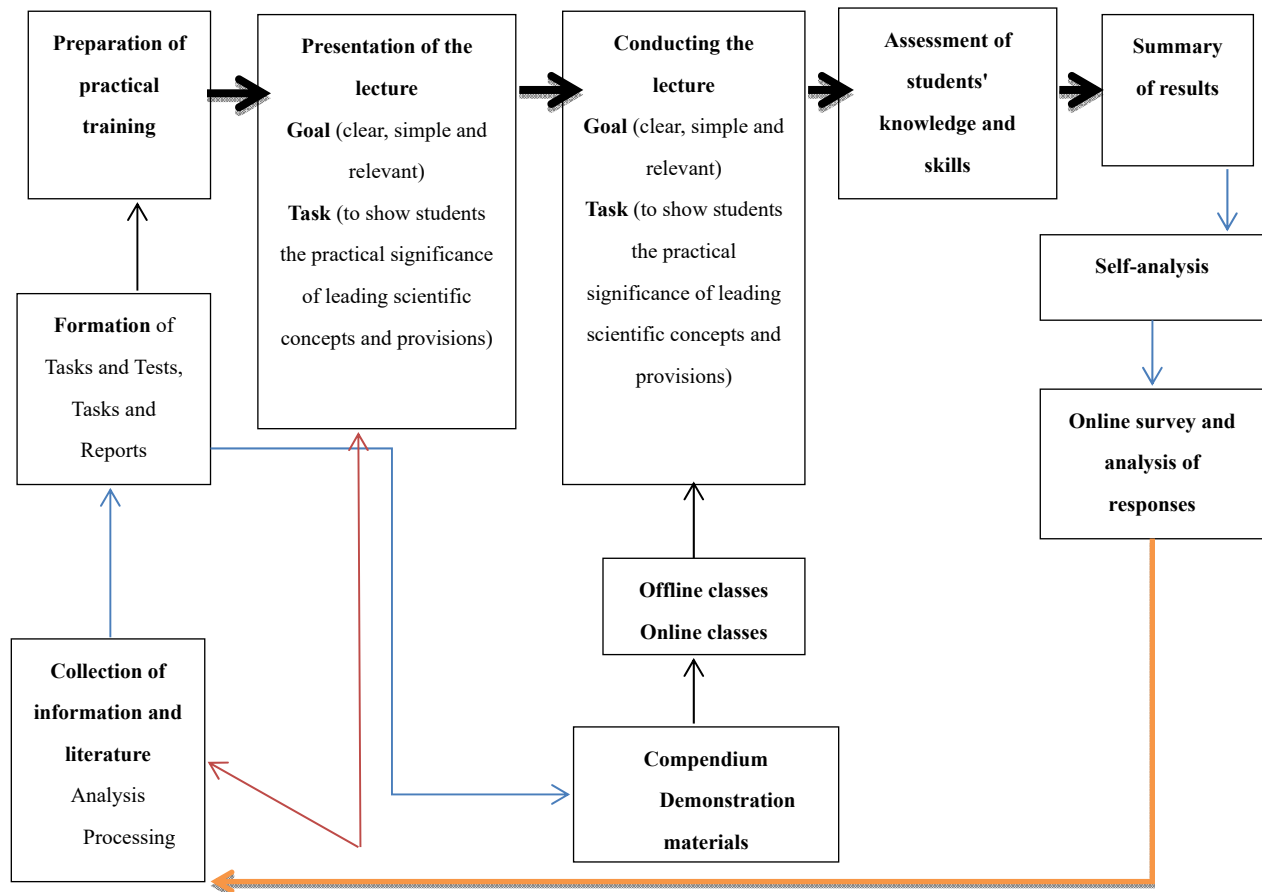


**Figure 2.** An Example of Organizing a Practical Class in a Higher Education Institution

Source: created by authors.

The combination of synchronous and asynchronous learning modes enhances the flexibility of the interaction between teachers and students, enabling them to focus on critical aspects of the lesson in real-time. At this educational institution, the use of these modes is evident in their traditional classes, providing an optimized learning experience. Moreover, the institution supports the use of diverse digital tools during teaching, depending on the learning scenario, providing teachers with the freedom to choose the most effective tools for their course to achieve desired outcomes. The use of digital tools and the flexibility offered by the combination of synchronous and asynchronous learning modes can help ensure that the learning experience remains engaging and effective, even amidst pandemic-related disruptions.

Oxford University's approach to organizing laboratory work is grounded in a flexible and inclusive strategy, whereby the relevant technologies are preconceived and arranged, and subsequently employed by instructors in accordance with the planned methodologies and course stage. As an illustration, during the introductory phase of the course, where it is imperative to provide a comprehensive overview, educators utilize the Panopto platform, which enables both asynchronous and synchronous viewing of the materials by students. Additionally, tools suitable for hybrid, traditional, or virtual conditions are used at the laboratory work stage. For example, Teams software was used to organize group learning. Finally, discussion and homework - Canvas is used at the evaluation stages of results.

The process of organizing lectures differed from that of conducting laboratory classes, mainly due to the availability of different digital tools for addressing specific tasks. Instructors used the Panopto tool during the presentation stage, the Canvas toolkit for discussion, and specific tools for group work.

Teams are used; for organizing a survey - Vevox. The established rules for conducting various classes require synchronizing interaction and polling. At the same time, presentation and discussion can be asynchronous.

Thus, the learning model provides for dynamic interaction in different types of classes, allowing maximum involvement of students in learning processes.

The experience of educating teachers and preparing them to manage such classes using different platforms is interesting. With the sudden shift to online learning, many educators had to adapt quickly to new teaching environments and technologies, which was a significant challenge for some. The FIT program at Oxford University recognized this challenge and offered comprehensive technical and technological assistance to instructors, helping them to transition to virtual instruction seamlessly. Moreover, the program provided training and support for educators to manage their digital classrooms effectively, promoting engagement and collaboration among students.

Oxford University ensured standardized teaching by adopting a flexible and inclusive approach that gave teachers and students the freedom to choose their preferred time, place, and learning methods. This approach allowed course teams to quickly adapt their teaching practices to new learning methods and transition to more personalized or distance learning models as needed. By promoting flexibility and inclusivity in teaching, the FIT program at Oxford University allowed for more individualized learning experiences that met the diverse needs of students. Moreover, it provided a greater degree of autonomy to educators, allowing them to customize their teaching methods to suit their students' learning styles. The FIT program's focus on standardized teaching also ensured that all students received a high-quality education, regardless of their location or personal circumstances. This approach helped to promote equity and accessibility in higher education, allowing students from all backgrounds to access and succeed in digital learning environments.

The implementation of FIT technologies has provided educators with a model to transition from traditional to distance learning models, while meeting the unique needs of students. Furthermore, the technology has facilitated the division of classes into shorter segments, which has resulted in increased levels of learning. Furthermore, Canvas templates helped teachers save time in developing courses and digital content, ensuring that they were able to focus on delivering quality education to their students.

The adoption of FIT Canvas and the support provided by consultants have helped Oxford to provide an effective and standardized online learning experience to its students. The adaptable and inclusive approach has given teachers the flexibility to adjust their teaching methods to meet their students' needs, while the integration of technology has enabled the development of captivating and interactive courses. By leveraging these tools and methods, Oxford has been able to successfully navigate the transition to online learning and provide its students with quality education during challenging times.

## 5. Discussion

After conducting research on the changes in teacher-student interaction and communication in higher education institutions due to the Covid-19 pandemic, it has become apparent that technical and technological support is crucial for the successful implementation of digital learning models based on flexible and inclusive approaches. This support ensures that all students have access to the necessary tools and resources to participate fully in the virtual learning environment, regardless of their location or socioeconomic background. Technical and technological support encompasses a range of measures, including access to reliable and high-speed internet, adequate computing equipment, and user-friendly learning management systems. These measures can help to unify the teaching and learning experiences of students, creating a level playing field for all learners and promoting more inclusive education. Technical and technological support is essential for the successful implementation of digital learning models in higher education institutions. By ensuring that all students have access to the necessary tools and resources, we can promote a more inclusive and equitable education system. As such, it is crucial that higher education institutions invest in the necessary infrastructure to support digital learning, particularly in the wake of the ongoing Covid-19 pandemic.

To ensure a dynamic interaction between teachers and students, which is the foundation of digital higher education, it is essential to synchronize different types of learning activities. This synchronization ensures that all aspects of the learning experience are integrated, allowing for seamless communication and collaboration between educators and students. To achieve this, it is crucial that higher education institutions approve effective digital models that facilitate the planning and organization of educational processes. These digital models must be carefully designed to meet the specific needs of both educators and students, promoting a collaborative and engaging learning environment.

## 6. Conclusions

The study highlights the importance of technical and technological support in facilitating effective communication in digital learning. The combination of inclusive and flexible learning approaches promotes the adequacy of the educational process and communication convenience. The higher education institution's digitalization activities, crisis planning, and scenario development ensure the effectiveness of the digital learning model and promote dynamic interaction between teachers and students. Oxford University's Business Continuity Planning system serves as an exemplary model for organizing distance learning during times of crisis. Firstly, the system allows the institution to continue providing quality education even during times of uncertainty, such as natural disasters, pandemics, or other emergencies. This ensures that students do not miss out on valuable learning opportunities and that their academic progress is not disrupted. Secondly, the system promotes a standardized approach to teaching and learning that enhances communication and interaction between teachers and students. The use of hybrid, virtual, and in-person class templates ensures that all students have access to the same content, regardless of their location. This promotes fairness and equity in education and helps to minimize the impact of disruptions on the learning process. Thirdly, the system utilizes digital learning tools that enable synchronous and asynchronous interaction between teachers and students. This allows for real-time feedback, discussions, and collaboration, which are critical elements of effective learning. Additionally, the flexibility to select and combine various teaching tools, such as videos, quizzes, or group work, promotes engagement, motivation, and active learning.

The institution's hybrid, virtual, and in-person class templates and digital learning tools enable standardized teaching and learning processes, synchronous and asynchronous interaction, and accelerate the interaction between teachers and students. The researc shows the need for a student-centered approach in digital learning. Teachers should design their lessons with the diverse needs and backgrounds of their students in mind and utlize various digital tools and platforms to create an inclusive and engaging learning environment that caters to the different learning styles of their students. It is importent to provide regular feedback to their students to promote their motivation, progress, and success in digital learning. These findings provide practical recommendations for educators and institutions to enhance digital learning experiences and mitigate the challenges associated with remote learning.

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