**Factors affecting the Adoption of Videoconferencing across American Universities during COVID-19 Pandemic**

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# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background**

The coronavirus pandemic has adversely impacted several sectors of the economy. Among the sectors affected upon by the pandemic is education. According to Chaka (2020), the pandemic has brought changes to the teaching-learning process, particularly across the institutions of higher learning. Besides, the pandemic has brought new changes to how teachers and students interact during the learning process. The pandemic has seen learning institutions, not only in the United States (US) but across the world, find themselves constrained towards undertaking their academic endeavors with students exclusively online.

The adoption of online learning through such platforms as zoom and videoconferencing emerged among the best measures for governments to curb the further spreading of the pandemic. Also, this has been a critical measure through which governments can stamp continuity that is required in the educational process (Turgut and Karal, 2015). Thus, universities had no option other than to adhere to the government directives to adopt online learning.

Internet-based learning has always been an option for traditional learning, particularly across colleges and universities. Nevertheless, the move to e-learning through the relevant platforms emerged as an essential element to maintain academic activities across universities. According to Jacques, Ouahabi, and Lequeu (2020), such a paradigm shift has seen students changing their perceptions of the online pedagogical approach to the traditional one. If the findings of previous studies are anything to go by, then e-learning comes with several benefits, both to the student and the educators. For instance, online learning offers the necessary student-centredness, with high levels of flexibility.

Studies by Fatani (2020) have established that online learning enhances interaction among students by providing both asynchronous and synchronous tools. Some of these tools include e-mail and forums, together with chats and videoconferences. It is worth noting that teachers have an easy time distributing content to a relatively large number of students or users through internet technologies. According to Serhan (2020), e-learning offers learners the necessary control over the learning content. Besides, learning has a say on time spent learning, thus making the entire process adaptable to the students' needs. Also, the learning process is adaptable as per the objectives of learning. With such opportunities, teachers can communicate better with their students and improve the entire learning process employed by students.

## **1.2 Research Problem**

Despite the benefits of online teaching across universities, during the coronavirus pandemic, no study has been done to examine the possible factors affecting the adoption of videoconferencing across universities. This confirms a major research gap in this area, with stakeholders in the education sector yet to define factors defining the success of e-learning. In return, the e-learning sector, particularly videoconferencing, is subjected to several risks, all of which might jeopardize the quality of learning.

## **1.3 Research Significance**

The proposed study will address the already existing research gap in the e-learning sector across the American universities at the time of COVID-19. The proposed research will shed light on factors behind the successful adoption of e-learning at the current times of COVID-19. The developed insights will be vital in enhancing the quality of education by improving the successful adoption of video conferencing.

## **1.4 Research Questions**

Based on the above background analysis, the proposed study seeks to respond to the following research questions:

* *What are the demographic factors impacting the successful adoption of videoconferencing across American universities during COVID-19?*
* *What are the technological factors impacting the successful adoption of videoconferencing across American universities during COVID-19?*

## **1.5 Research Objectives**

Based on the research questions, the study sought to explore and realize the following objectives:

* *To establish the demographic factors impacting the successful adoption of videoconferencing across American universities during COVID-19.*
* *To establish the technological factors impacting the successful adoption of videoconferencing across American universities during COVID-19.*

## **1.6 Key Terms**

The following key terms have been used in developing the research proposal:

* COVID-19 – refers to an infectious disease whose causative agent is the SARS-CoV-2 virus.
* Videoconferencing – refers to an online technology users use in different locations in engaging in a face-to-face meeting.
* Online learning – refers to an education endeavor conducted over the internet.

# **CHAPTER TWO: LITERATURE REVIEW**

## **2.1 Available Literature**

Coman *et al.,* (2020) looked at how Romanian universities managed to offer education during COVID-19. The researchers were specifically interested in the adoption of e-learning by Romanian universities. In particular, the researchers were interested in the perceptions held by students when it comes to online learning. This extended to the students' capacity and ability to stimulate information, alongside the adoption of e-learning platforms.

Realizing the above objectives saw the researchers going for an online survey comprising of semi-structured questionnaires. The study participants included 762 students across two top Romanian universities. The data analysis established that universities in the region were not ready for exclusively online learning. Coman *et al.,* (2020) revealed that the advantages or benefits that come with e-learning tend to dimmish in value, with the associated disadvantages becoming prominent. The study established the technical problems are the significant e-learning inhibitors, followed by teacher lack of skills among the educators.

Zalat, Hamed, and Bolbol (2021) examined the experiences of e-learning as a critical pedagogical tool during COVID-19 among faculty members. They aimed at estimating the perceptions held by the faculty members, their experiences. Besides, the researchers sought to tell the barriers and challenges facing the adoption and effectiveness of e-learning during COVID-19. Realizing the above objectives saw the researchers going for an electronic questionnaire comprising a validated technology acceptance model (ATM). The study established that at least 88% of the faculty members educational value associated with e-learning is enhanced by the improved technological skills of the faculty members. Besides, the researchers established that unstable internet connectivity and lack of computers alongside inadequacy in computer labs are critical barriers to adopting e-learning across the selected universities.

Turgut and Karal (2015) examined factors impacting the interaction between an instructor and the learners in a distance education process using video conferencing. The researchers embraced a case study as a qualitative research pattern alongside purposive sampling. The collected data were subjected to content analysis. Turgut and Karal (2015) established that the techniques and methodologies employed by the instructors are factors impacting their interaction with students. The study further established that the instructors' supportive behaviors are critical determinants of their interaction with students during videoconferencing.

## **2.2 Conceptual Framework**

The conceptual framework guiding the proposed study goes as follows:

*“Demographic factors and technological factors are key determinants for a successful adoption of videoconferencing across the American universities, during COVID-19 pandemic.”*

**Demographic Factors**

**Successful Adoption of Videoconferencing**

**Technological Factors**

Independent variables Dependent variables

# **CHAPTER THREE: METHODOLOGY**

## **3.1 Research Design**

The proposed study will employ a descriptive research design. This will entail observing the successful adoption of videoconferencing across the selected American universities without influencing the demographic and technological factors. Thus, the proposed study will employ the design in describing the successful adoption of videoconferencing across the selected American universities without influencing their causal factors.

## **3.2 Population and Sampling**

The targeted population are users of video conferencing at the university: students and faculty members. Generating the sample size will see the researcher employing random sampling. The researcher targets a sample size of 200.

## **3.3 Data Collection**

The required data will be collected through online and offline surveys. This will entail the use of structured questionnaires to gather respondents from the study participants.

## **3.4 Data Analysis**

The collected data will be subjected to cleaning. This will be followed by coding and inputting in SPSS 26. The data analysis will entail a mixture of descriptive and inferential statistics. The latter will entail correlation and regression analyses.

## **3.5 Ethical Principles**

Like any other research, the proposed study will adhere to the relevant ethical principles guiding a study. Thus, the researcher will observe such principles as anonymity, confidentiality, and participant consent, among others.

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