

A Descriptive Study of Online Perceptions for Community College Students

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Abstract

The problem was more than one-third of college students feel disengaged and demotivated learning online during extreme or unforeseen circumstances, resulting in low academic performance. The purpose of the qualitative descriptive study was to explore students' perceptions about experiences of motivation, engagement, and learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York. The study attempted to fill the gaps in the literature by examining how digital technology can be used to motivate and engage students at higher education institutions in the United States. Constructivism and behaviorism learning theories were the theoretical frameworks for the study. The research questions examined students' feelings about the online learning environment and perceptions of motivation and engagement. The data were collected using semi-structured interviews containing six open-ended questions from 15 higher education students out of 950 students who responded to the participant recruitment invitation. The selection criteria were convenience sampling. Thematic analysis was used to find patterns, connections, relationships, and meanings in the data. Results from the study confirmed remote learning was more convenient. The interaction between the course instructor and the students along with the use of instructional-based digital technology has enhanced online performance, motivation, and engagement. Recommendations are to provide professional development opportunities focusing on technology to enhance the learning environment for students.

Keywords: educator, behaviorism learning theory, motivation, engagement, perception, 21st-century skills theory, constructivism, digital divide, and digital literacy.

Dedication

I would like to dedicate the dissertation to the people in my life who believed in me and provided the encouragement I needed to complete my doctorate degree. The DE team was always available to assist and provided encouraging words. I will always be grateful for how you celebrated each milestone of my doctoral journey.

My mother has always been my biggest fan. She has encouraged me throughout my life to be the best I can possibly be. Her love and support are what allowed me to complete a lifelong goal.

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Chapter 1: Introduction

COVID-19 began to impact the United States in March of 2020 during the higher education spring semester. As a result of a worldwide pandemic, education experienced an immediate transition to remote learning (Adnan & Anwar, 2020). Global restrictions caused by the COVID-19 pandemic forced educational institutions to provide online services to more than 60% of students around the world (Alqahtani & Rajkhan, 2020). Professors and adult learners who had limited knowledge of online education were challenged by how to use instructional-based digital technology effectively to facilitate learning in an online environment. The descriptive study explored the perceptions of online learning for higher education adult learners at a large urban community college on Long Island in New York.

As a result of the study, educational institutions will develop an understanding of how to use instructional-based digital teaching methods to effectively engage and motivate students to enhance the learning environment. Using instructional-based digital technology requires an awareness of how the technology will interact with students to improve learning outcomes (Derboven et al., 2017). The following sections are addressed in this chapter: The background of the problem, statement of the problem, the purpose of the study, the significance of the study, research questions, theoretical framework, definition of terms, assumptions, scope and delimitations, limitations, and chapter summary.

Background of the Problem

The background of the problem is the limited amount of distance education support at higher education institutions to properly train faculty on how to align curriculum with digital technology in the United States. Educators demonstrate a lack of experience in effectively using instructional-based digital technology to engage students at higher education institutions in the

United States (Khalil et al., 2020). Higher education students' perception of online education has been affected (Adnan & Anwar, 2020). Adult learners with limited knowledge of online education may be challenged with how to use instructional-based digital technology to facilitate learning in an online environment.

The literature review section addresses three main topics related to the online learning environment and the experiences of higher education adult learners: students' perception of online learning, students' online performance, and digital instructional strategies. Distance education also referred to as online learning separates students from the course professor and tends to rely on technology to teach and learn. Student learning is self-directed while interacting with online course material (Duffy & Cunningham, 1996). Online learning is not a new concept. In fact, over 6 million students were enrolled in at least one online course in the United States before the pandemic (Palvia et al., 2018).

One of the main issues identified in the literature related to online learning is how digital literacy skills and access to high-speed broadband will improve student motivation and facilitate growth (Kuehl, 2018). Poor internet connectivity was an issue for some students in addition to the limitation of access to meeting platforms and digital devices during the pandemic (Chandrasinghe et al., 2020; Katz et al., 2021). Higher education institutions should provide the resources necessary to conduct quality distance education courses (Ince et al., 2020). Digital literacy is an important part of the 21st century and government. Thus, school districts and communities must bridge the digital divide gap to improve literacy. High-quality and equitable digital literacy support will improve student engagement, learning, well-being, and perception of remote learning (Bouchey et al., 2021). The three topics included in the literature review provide a better understanding of how students' perception influences online motivation and engagement.

Statement of the Problem

The problem is more than one-third of college students feel disengaged and demotivated when learning online during extreme or unforeseen circumstances, resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). A limited amount of distance education support is an issue at higher education institutions to properly train faculty. How to align curriculum with digital technology to effectively engage students to facilitate learning in an online environment in the United States is a major issue for educators. As a result, higher education adult learners' perception of online education, has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). A better understanding of students' perceptions is necessary to improve online learning outcomes.

The pandemic forced teachers and students to suddenly adapt to instructional-based digital technology. Online learning requires a certain level of pedagogical content knowledge to design and organize an effective learning environment (Rapanta et al., 2020). COVID-19 has offered significant opportunities to evaluate effective online pedagogy methods to facilitate learning (Crawford et al., 2020). This proposed study was necessary to fill the gap between online learning experiences and the effective use of instructional-based digital technology to align curriculum at higher education institutions in the United States.

Purpose of the Study

The purpose of the qualitative descriptive study was to explore students' perceptions and feelings about experiences of motivation, engagement, and learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York. This study was necessary to create greater awareness and appreciation for online learning and instructional-based digital teaching methods. Digital literacy is an

essential 21st-century skill that must be taught to students to exist in a global economy (Divya & Haneefa, 2018). Information from this study will add to the research on effective instructional-based digital teaching methods for online learning.

The research explored how the effective use of instructional-based digital teaching strategies can influence student motivation and engagement. The sample size generated from the target population of 10,500 community college students enrolled in 20 fields of study was 20 with a minimum of 15 participants. The selected instrument for the study was an in-depth interview. The purpose of semi-structured interviews was to explore the experiences of online learning for community college students (Schnittker, et al., 2018). The interviews were semi-structured with six open-ended questions to guide the collection of community college students' perceptions of online learning.

Significance of the Study

This study contributed to the knowledge base by providing data on actual experiences of higher education adult learners and the meanings students have on the online learning experience. Motivation and engagement are important components of effective teaching practice for online education (Gamage et al., 2020). Students' perceptions of online learning should be monitored regularly by examining instructional methods and learning outcomes (Khalil et al., 2020). Information from this study will add to the research on the effective use of instructional-based digital teaching methods to motivate and engage students.

As a result of the study, educational institutions will be able to determine how to accommodate higher education adult learners using instructional-based digital teaching methods that are effective, motivating, and engaging to enhance the learning environment. Policies and guidelines are necessary to support learning and to create an awareness of digital-based

pedagogical methods to improve the learning environment (Roache et al., 2020). Educational-based digital technology provides the skills students need to critically think and problem solve. Technology enhances these important skills by building student confidence (Ananga, 2020). Prioritizing meaningful learning activities aligned with learning goals is necessary to increase student effort and achievement. Continuous interactions between the course instructor and the students in addition to the use of educational-based digital technology will result in better learning outcomes (Kusumawati, 2020).

Research Questions

Motivation and engagement are defined as processes causing an individual to act or behave in a particular way. Motivation and engagement influence students' perception of online learning and improve satisfaction levels (Rad, et al., 2021). As a result of the research, higher education institutions will develop an understanding of how to implement instructional-based digital technology to motivate and engage students while studying online to improve learning outcomes. The following research questions guided the study:

Research Question 1: How do students at a large suburban community college on Long Island in New York feel about the online learning experience under extreme or unforeseen circumstances?

Research Question 2: How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?

Research Question 3: What are the perceptions of students at a large suburban community college on Long Island in New York about online engagement when studying under extreme or unforeseen circumstances?

Theoretical Framework

The application of the dimensions of constructivism as a 21st-century skills theory (Bada & Olusegun, 2015) and behavioral learning (Weegar & Pacis, 2012) theory supports the purpose of the qualitative descriptive study as a theoretical framework. Constructivism learning theory and the behaviorism learning theory were used to explore the experiences and meaning of COVID-19 for higher education adult learners at a large urban community college on Long Island in New York. Constructivism learning theory was applied to explore the significance of student engagement, curriculum alignment, and the effective use of instructional-based digital technology to improve online learning outcomes (Christian et al., 2020). The behaviorism learning theory was applied to explain how the online learning environment influences student behavior.

A constructivist learning environment allows students to actively create their meanings and knowledge about an experience as opposed to passively. Learning is not based on what the learner heard even if it can be repeated (Aldoobie, 2015). Dewey (1938) and Vygotsky (1978) both believed learning is a social activity, and interactions with others will influence a student's thinking. Online interactions using digital technology align with the concepts of the constructivism theory (Mohammed & Kinyo, 2020). Behaviorism learning theory (McLeod, 2003) explains how teachers can directly influence student behavior based on environmental interactions (Presti et al., 2020). The behaviorism learning theory can help teachers understand how a student's environment can impact online behavior and how to effectively implement instructional-based digital technology to improve learning outcomes. Constructivism learning theory and behaviorism learning theory explain how the influence of social and environmental

interactions affects student online motivation. A detailed description of the theoretical framework is in Chapter 2.

Definitions of Terms

The following terms and concepts are used throughout the study: *motivation, engagement, perception, educator, digital literacy, digital divide, 21st-century skills, constructivism, and behaviorism*. The terms and concepts may have multiple meanings and have been defined to provide clarity. All the terms and concepts have emerged from the review of the literature.

Behaviorism Learning Theory. Behaviorism learning theory (McLeod, 2003) explains how teachers can directly influence student behavior based on environmental interactions (Presti et al., 2020).

Constructivism. The central idea of constructivism is students learn best when they can connect prior learning to new concepts (Picciano, 2017).

Digital Divide. The digital divide is the gap between those who have access to digital devices and high-speed broadband and those who do not (Katz et al., 2021).

Digitally Literate. To become digitally literate an understanding of how to navigate and find information online is essential (Udoewa et al., 2016).

Educator. An educator is an individual who educates students and develops the curriculum (Koeberlein-Kerler, 2020).

Engagement. Engagement is defined as the relationship between the professor, students, and course content (R. E. Rad, et al., 2021).

Motivation. Motivation is defined as processes causing an individual to act or behave in a particular way (R. E. Rad, et al., 2021).

Perception. Perception is defined as the process of forming a subjective picture of an event (Mannopovna, 2019).

21st-Century Skills Theory. The 21st-century skills theory is an education standard and a reform movement to improve academic and professional outcomes (Siddiq et al., 2017).

Assumptions

Assumptions in research are thoughts accepted as truth without proof and that have potential weaknesses including honesty of the participants and theoretical biases (Creswell & Poth, 2016). Based on the study's research design, population, and delimitations certain truths can be assumed to be true. Assumptions allow researchers to determine whether correct conclusions can be drawn from the analysis results. Methodological assumptions are used in qualitative research and allow the research to justify interpretations (Creswell & Poth, 2016). Researchers interpret data from in-depth interviews using open-ended questions to develop a deeper understanding and meaning of the experiences under investigation. Study assumptions are necessary to avoid drawing false conclusions from the research analysis.

The following assumptions were used to help determine the conclusions based on the results of the analysis. Students are more encouraged to interact with course content when it is paired with instructional technologies. Technology facilitates student engagement when it is incorporated into passive and active learning activities. The perception of online learning can be improved by the inclusion of digital technology (Bennett et al., 2018). Policies and guidelines are necessary to support learning and to create an awareness of digital-based pedagogical methods to

improve the learning environment (Roache et al., 2020). Digital literacy has a major impact on a students' perception of online learning.

Scope and Delimitations

The scope and delimitations of a dissertation refer to the topic and boundaries of the research problem under investigation. Scope provides the details of how in-depth the research explored the research questions and the parameters related to the target population (Kovanović, et al., 2017). The scope typically needs to be narrowed down to a sample size representative of the target population.

Delimitations refer to the study's boundaries and information included or excluded based on the researcher's decisions and can be characteristics limiting the scope (Theofanidis & Fountouki, 2018). Inclusion and exclusion criteria qualify or disqualify a potential research participant. The inclusion and exclusion criteria vary depending on the study (Huls et al., 2018). The participation inclusion criteria included students enrolled in courses at the community college during the spring 2020 and the fall 2021 semesters. Exclusion criteria included prior relationships with interested participants due to the potential risk of interfering with the success of the study or unfavorable outcomes.

Other delimitations include the choice to use a particular research methodology to collect data as opposed to another. The chosen methodology for the study was qualitative research. Unlike quantitative research, qualitative research is a methodology used to provide a deeper insight to explore perceptions and why humans behave in a certain way by collecting and analyzing non-numerical data (Barnham, 2015).

The focus of the study was to explore students' perceptions and feelings about experiences of motivation, engagement, and learning outcomes when studying online under

extreme or unforeseen circumstances at a large suburban community college on Long Island, New York. Qualitative research was used to develop an understanding of the meanings of students' perceptions of online learning. The methodology provides a deeper insight to explore perceptions (Barnham, 2015). A descriptive research design was implemented to capture the perceptions of online learning for community college students. The rationale for the descriptive design to answer the research questions was based on the philosophical perspective of how an individual perceives an event (Qutoshi, 2018). The descriptive design for this study was significant for promoting research focused on the lived experiences of community college students and the perceptions of the online learning environment.

Collecting students' perceptions can provide insight into how to improve engagement and motivation while studying online. To ensure the study's results are transferable and can be applied to other events or populations details were provided regarding the research context including any assumptions made throughout the research process (Munthe-Kaas et al., 2019). The analysis model was Thematic Analysis (TA). TA is an evidence-based approach seeking to extract meaning and concepts (Rugwiji, 2020). The TA model is a preferred approach for examining complex and ambiguous personal lived experiences.

As mentioned earlier the constructivism and the behaviorism learning theory were used as the theoretical framework for the study. Constructivism learning theory and the behaviorism learning theory are related to this study to explain how the influence of social and environmental interactions affects student online motivation. Constructivism learning theory and the behaviorism learning theory were applied to explain the benefits of online interactions to improve students learning outcomes (Ghazi-Saidi et al., 2020). Constructivism was applied to this study to examine how interactions between teachers and students improve online

perceptions. Behaviorism was applied to this study to explore how students behave while learning online.

Limitations

Limitations of a study were any characteristics influencing the research results including the sample size, methodology, research instrument, and bias (Theofanidis & Fountouki, 2018). As a qualitative approach to investigation, descriptive design has advantages and disadvantages. A disadvantage of descriptive design is difficulties with data analysis and interpretation. To ensure dependability research procedures and findings were overt and properly recorded (Sanjari et al., 2014). The degree of generalizability provides evidence the research findings could be applied to other events or populations (Munthe-Kaas et al., 2019). To ensure the study's results are transferable details were provided regarding the research context including any assumptions made throughout the research process.

The participants were recruited from a large suburban community college on Long Island, New York. As an adjunct professor and an instructional designer at the research site, a professional or personal relationship can exist. Attempts were made to mitigate the potential risks associated with previous or future relationships with the study's participants (Hamza et al., 2021). Students were selected voluntarily in unassociated fields of study with explicit inclusion and exclusion criteria following Institutional Review Board (IRB) approval.

Chapter Summary

The introduction identified the major sections of the dissertation and the intended research including the background of the problem, statement of the problem, the purpose of the qualitative descriptive study, the significance of the study, research questions, theoretical framework, definition of terms, assumptions, scope, and delimitations, and limitations. The

significance of incorporating digital technology to enhance the online learning environment and the ability to align curriculum to effectively engage and motivate students is essential to facilitate learning (Wekerle et al., 2020). The descriptive research design allows for a qualitative analysis of the lived experience of the higher education adult learners to identify commonalities, shared meanings, and perceptions of the online learning environment. Current peer-reviewed research on the topic and the methodology for the study will be described in detail in Chapters 3 and 4.

Chapter 2: Literature Review

The background of the problem is the limited amount of distance education support at higher education institutions to properly train faculty on how to align curriculum with digital technology in the United States. The problem is the disparity between online learning experiences and the effective use of instructional-based digital technology to engage students at higher education institutions in the United States (Khalil et al., 2020). Higher education students' perception of online education, as a result, has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). Improving digital literacy skills and access to high-speed broadband will improve student motivation and facilitate growth (Kuehl, 2018).

The purpose of the descriptive study was to explore how COVID-19 influenced sophomore higher education students' perception of online learning at a large urban community college on Long Island, New York. The study explored the influence online learning had on student motivation during COVID-19 to find a shared meaning among the participants. Previous research on the topic of online learning during the COVID-19 pandemic is included in the literature review regarding online learning outcomes and digital literacy skills. The literature review section is divided into three main topics related to the online learning environment and the experiences of higher education adult learners: students' perception of online learning, students' online performance, and digital instructional strategies. The three main topics provided a better understanding of how COVID-19 influenced online motivation. The last part of this section summarizes the findings of related literature and reiterates the need for the proposed study.

Literature Search Strategy

The search for current, 2019-2021, peer-reviewed articles was conducted via the American College of Education online library search engine One Search. The databases included Education Source, Academic Search Complete, and Business Source Complete. The following search terms were used to locate articles specific to this study: *COVID-19, higher education, online learning, digital technology, digital literacy, 21st-century skills, constructivism, and behaviorism.*

Theoretical Framework

Application of the dimensions of constructivism as a 21st-century skills theory (Bada & Olusegun, 2015) and behavioral learning (Weegar & Pacis, 2012) theory supports the purpose of the descriptive study as a theoretical framework. Constructivism learning theory and the behaviorism learning theory were used to explore the experiences and meaning of COVID-19 for higher education adult learners at a large urban community college on Long Island in New York. Constructivism learning theory was applied to explore the significance of student engagement, curriculum alignment, and the effective use of instructional-based digital technology to improve online learning outcomes (Christian et al., 2020). The behaviorism learning theory was applied to explain how the online learning environment influences student behavior.

Constructivism Learning Theory

Based on the beliefs of Dewey, Bruner, Piaget, and Vygotsky, the central idea of constructivism is students learn best when they can connect prior learning to new concepts (Picciano, 2017). A constructivist learning environment allows students to create their meanings and knowledge about an experience actively as opposed to passively. Students can construct their knowledge and teachers serve as facilitators to promote a student-centered learning environment.

Learning is not based on what the learner heard even if the information can be repeated (Aldoobie, 2015). Dewey (1938) and Vygotsky (1978) both believed learning is a social activity and the interactions with others will influence a student's thinking. Online interactions using digital technology align with the concepts of the constructivism theory (Mohammed & Kinyo, 2020).

Educators view 21st-century skills as a crucial component to recognize the digital literacy skills necessary to facilitate learning in an online environment (Siddiq et al., 2017). The 21st-century skills theory is an education standard and reform movement to improve academic and professional outcomes. Constructivism learning theory was used in the proposed study to explain the significance of social interaction between the instructor and the student to facilitate life-long learning in the online environment (Picciano, 2017).

Learning theories are designed to provide an understanding of how students learn (Picciano, 2017). The behaviorism learning theory states learning is a function of the interaction with the environment in response to an environmental stimulus. Watson (1913) believed environmental factors influence behavior and are measurable through controlled observations. Behaviorism is mainly concerned with observable behavior as opposed to emotion. Behavior can be explained by the association of a simple stimulus-response.

Behaviorism Learning Theory

Behaviorism learning theory (McLeod, 2003) explains how teachers can directly influence student behavior based on environmental interactions (Presti et al., 2020). The behaviorism learning theory can help teachers understand how a student's environment can impact online behavior and how to effectively implement instructional-based digital technology to improve learning outcomes. Behaviorism learning theory served as the theoretical framework

to identify student behavior in an online learning environment to support students in the acquisition of academic success.

According to behaviorism learning theory, learners establish adeptness through feedback and revisions and reinforcement ensures motivation (Mödrischer et al., 2006). Behaviorism was applied to this study to explore how students behave while learning online. Constructivism states learning is an active process and knowledge should not be spoon-fed (Duffy & Cunningham, 1996). Constructivism was applied to this study to examine how interactions between teachers and students improve online perceptions. Constructivism learning theory and the behaviorism learning theory are related to this study to explain how the influence of social and environmental interactions affects student online motivation. Interactive class discussions between the students and the instructor can have a positive impact on student motivation resulting in improved learning outcomes (Picciano, 2017). Constructivism learning theory and the behaviorism learning theory were applied to explain the benefits of online interactions to improve students learning outcomes (Ghazi-Saidi et al., 2020).

Research Literature Review

The literature review identifies the significance of online learning and highlights the challenges COVID-19 placed on the global education system. Each section will reveal how effective course design plays a significant role to enhance the learning environment for students. The peer-reviewed articles will address students' perception of online learning, students' online performance, and digital literacy.

Students' Perception of Online Learning

Distance education also referred to as online learning separates students from the course professor and tends to rely on technology to teach and learn. Student learning is self-directed

while interacting with online course material (Duffy & Cunningham, 1996). The pandemic forced teachers and students to suddenly adapt to instructional-based digital technology. Challenges occurred on many levels, especially how online learning was perceived as an effective platform for teaching and learning. Student perception of online learning significantly influences satisfaction levels (R. E. Rad, et al., 2021). A study conducted by Alvarez (2020) explored the experiences of higher education students related to the immediate shift to remote learning. Several themes were revealed including lack of internet, device access, and effective support.

During the 2020 semester, research suggested the online learning shift caused a great deal of stress for students because of overwhelming responsibilities leading to a negative perception of online learning (Dhawan, 2020). The perception of online learning can be improved by the inclusion of digital technology (Bennett et al., 2018). Computer-based learning creates an engaging student-centered environment (Coymak, 2019). Before the pandemic higher education Learning Management Systems (LMS) had been considered a robust platform to promote student learning (Wekerle et al., 2020). Students are more encouraged to interact with course content when information is paired with instructional technologies.

As a result of COVID-19 students have been impacted by the sudden change to remote learning (Adnan & Anwar, 2020). The pandemic caused an unplanned shift from traditional in-classroom learning to online learning forcing educators to examine the virtual learning culture (Jena, 2020; Khalil et al., 2020). Students' perceptions of online learning should be monitored regularly by examining instructional methods and learning outcomes (Khalil et al., 2020). The COVID-19 pandemic is not the first virus to impact education, resulting in the consideration of distance learning (Adnan & Anwar, 2020). Institutions should examine procedures to prepare for

the possibility of an immediate transfer to remote learning for effective learning to continue without interruption.

In a qualitative study, using a sample of 126 higher education students, Adnan and Anwar (2020) noted lack of instructors and in-classroom socialization were two of the main reasons why students were challenged by online learning. The research on the topic of COVID-19 and online learning in higher education is limited. A better understanding of students' perceptions is necessary to improve online learning outcomes. Synchronized online learning was well received by medical students at a university in Saudi Arabia. Challenges still existed with digital technology, student behavioral characteristics, and institutional issues which should be examined (Khalil et al., 2020). Both studies are important because they support positive student perceptions regarding online learning.

Poor internet connectivity was an issue for some students in addition to the limitation of access to the meeting platform and digital devices during the pandemic (Chandrasinghe et al., 2020; Katz et al., 2021). In a qualitative study, using a sample of 1,047 medical students Chandrasinghe et al., (2020) noted the COVID-19 lock-down affected medical students in a variety of ways including access to hospitals. Internet access and the availability of the school's learning platform provided additional challenges for students. The study analyzed a teaching method using a lesson plan designed to cover patient cases. The course material was presented by several staff members via Zoom using PowerPoint and panel discussions lasting 120 to 180 minutes. The results of the study based on student feedback data suggested online education is an effective method for learning even with limited access to digital resources (Chandrasinghe et al., 2020).

A qualitative study conducted by Arici (2020) examining 322 Turkish students' opinions regarding the distance education process during COVID-19 revealed university students were negatively affected by the process. Some students expressed communication issues with the course instructor. Many course instructors had never taught online creating an errancy by having to learn an extensive set of skills quickly (R. E. Rad, et al., 2021). The study suggests presenting live online or recorded lectures to increase student engagement and improve the communication between the course instructor and the student by instantly responding to students' emails. Higher education institutions should provide the resources necessary to conduct quality distance education courses (Ince et al., 2020).

Ince et al. (2020), explored the opinions of 1,011 higher education students (612 men and 399 women) regarding distance education during the COVID-19 pandemic. The qualitative study utilized a survey containing questions about the type of devices students prefer to use and whether they had access to the internet. The study revealed more than half of the students have an internet connection at home while others did not, creating difficulties to determine the student's opinion about distance education based on connectivity. According to Ince et al. (2020), whether a student has access to the internet seems to impact opinions regarding the effectiveness of distance education. Students who had greater financial hardship experienced increased challenges with internet and device access during the pandemic (Katz et al., 2021).

A qualitative study conducted by Gonzalez-Ramirez et al., 2021, explored the experience of the unprecedented upheaval in education caused by the pandemic for higher education students. A survey distributed to 294 students using the college's learning management system addressed questions related to exhaustion, cynicism, and professional efficacy in addition to the learning platform transition. The survey revealed several of the top challenges students

experienced while completing the spring 2020 semester online, including connectivity, finding a quiet space, and financial barriers. The study revealed students were more exhausted and had a higher level of cynicism indicating the transition caused implications affecting students both personally and academically (Gonzalez-Ramirez et al., 2021). Faculty support through live Zoom sessions was reported to have a positive impact on students' perceptions (Casey, 2020). Further research is necessary to investigate the causal relationship between academic and lifestyle changes because of COVID-19 (Gonzalez-Ramirez et al., 2021).

Promoting global mobility through international travel in higher education due to the pandemic has become an emerging issue (Wu et al., 2020). Students who were expecting to and had already been accepted to study abroad programs during the spring 2020 semester were prevented from doing so. COVID-19 caused a global lock-down leaving institutions with no choice other than to suspend study abroad programs for students. Many countries view international educational exchange programs as a critical component of the education system and the global economy (Wu et al., 2020). In a qualitative study conducted by Wu et al. (2020), 2226 participants were surveyed to investigate students' perspectives on global mobility during the pandemic. This study is another indication of the impact COVID-19 has had on education and student perception. Students who already had overseas experience before the pandemic reported the importance of cultural awareness resulting from the study abroad experience. The pandemic exposed the need for social interaction using online learning platforms (Finnegan, 2021).

Virtual teaching and learning are emerging methods for educational institutions around the world (Shahzad et al., 2020). Electronic devices and social media created opportunities for students to communicate with course instructors and peers at any time and from any location thanks to computer programs, applications, and high-speed broadband. The attitude of students is

an important aspect of learning. A qualitative study conducted by Shahzad et al. (2020) examined student behavior in online learning. The results identified communication and information sharing as major benefits of online learning, especially during the lockdown caused by the pandemic. Learning management systems (LMS) became a primary resource to do so. Universities throughout the United States, United Kingdom, Canada, and Australia are using LMS to teach and learn online (Aldiab, et al., 2019). All stakeholders must be properly trained to ensure the effective use of the tools for teaching and learning (Shahzad et al., 2020).

Student attitudes can affect English language learners' ability to learn the language. English is an international language and has become the preferred language to learn as a second language. For students to learn a second language a positive attitude is required regarding the presence and social interaction between the instructor and the other students in the class. Shahzad et al., (2020) used an experimental approach to survey 100 students in the English department from two major universities in Pakistan. The study revealed under COVID-19 circumstances students had a positive attitude and were motivated to learn. Recommendations are to have a comprehensive plan to implement online learning to ensure a positive student attitude. Appropriate online teaching methods are required to enhance students' cognitive and creative skills (Andriivna et al., 2020).

Digital literacy has a major impact on a students' perception of online learning. Digital literacy is directly related to the digital divide. The digital divide is the gap between those who have access to digital devices and high-speed broadband and those who do not (Naidoo & Raju, 2012). The reason for the gap varies between individuals, households, and communities because of socio-economic levels, outdated technology with slower connections, and lack of internet access for those living in remote areas. Digital literacy is an important part of the 21st-century

and government, school districts, and communities must bridge the digital divide gap to improve literacy. High-quality and equitable digital literacy support will improve student engagement, learning, well-being, and perception of remote learning (Bouchey et al., 2021). Communities with limited access to technology should find ways for all students and faculty to gain access. Ensuring all students receive the proper technology education needed to succeed in a technology-driven global economy is essential.

COVID-19 exacerbated the digital divide when education was forced to shift to a remote learning platform (Johnson, et al., 2020). One of the benefits of the pandemic is exposing the need for skilled leadership to close the digital divide (Roache et al., 2020). Connecting underdeveloped areas to the world through the internet will enhance the perception of online learning for all stakeholders. Online access to digital material and support were two of the primary reasons why students struggled with remote learning (Johnson et al., 2020). Understanding and addressing students' needs and providing the resources required to learn will motivate students to focus on personal and academic growth without the concern of feeling isolated (Bouchey et al., 2021). Policies and guidelines are necessary to support learning and to create an awareness of digital-based pedagogical methods to improve the learning environment (Roache et al., 2020).

In a qualitative study conducted by Aristovnik et al., (2020) 30,383 higher education students were surveyed from 62 countries to determine how they perceived the impact of COVID-19 on various aspects of their lives. The study revealed students were concerned about the future of their education and professional careers in addition to the boredom, anxiety, and frustration caused by the pandemic. Socio-demographic characteristics also had a negative effect on how students perceived the impact of COVID-19. The characteristics that had the greatest

negative impact were male, part-time, first year, and low-income. Lack of digital technology skills and the perception of an increase in course workload also impacted student perception of online learning (Aristovnik et al., 2020). Additionally, the immediate transition to a remote learning platform did not benefit from traditional approaches to instructional design (Finnegan, 2021).

Globally, COVID-19 created challenges for teachers and students to instantaneously transfer from a face-to-face learning platform to remote learning. Students might have been distracted by external disturbances such as surfing the internet and chatting with friends (Yu, 2021). Online teaching requires an understanding of course design, digital technology, and how to organize the course to facilitate learning. Teachers with little or no online experience need to be guided and supported through the process. There are three types of presence a teacher must create online including social, cognitive, and facilitatory to improve student perception (Rapanta et al., 2020).

COVID-19 has exposed the need for teachers to come up with creative ways to engage students online while they are at home with family members who can cause distractions. Although there are many benefits to online education regarding cost and flexibility, disadvantages include low success rates, distractions, and the lack of student/teacher interaction (Hiranrithikorn, 2019). Another disadvantage is the qualification of faculty members. Many educators are unprepared to effectively utilize technology and administer effective assessments to evaluate learning. Assessments were a challenging part of the transition for teachers because of the increased chances of cheating (Rapanta et al., 2020). A suggestion would be to manage student online assessments through self-reflection and portfolios. Institutions around the globe

must invest in faculty professional development opportunities that will explore the use of digital technologies to enhance online pedagogical methods.

According to Al-Salman and Haider (2021), the quality of online instruction and assessment improves a students' attitude toward future online learning. The study investigated how digital technology, instruction, and assessment affect students' attitudes at a university in Jordan. The qualitative study used a questionnaire to determine students' perception of the immediate transfer to online learning imposed by COVID-19 during the spring semester. The study compared the responses of arts and humanities students to those enrolled in the sciences. The results revealed arts and humanities students had a higher satisfaction rate compared to the students enrolled in the sciences, possibility due to the lab component of the science courses (Al-Salman & Haider, 2021). Economic status may also be a contributing factor negatively impacting academic performance and psychological well-being (Katz et al., 2021).

A student's perception of online learning varies based on course type in addition to digital literacy, economic status, and psychological factors (Ramírez-Hurtado et al., 2021). Frequent instructor-to-student interaction may improve online student perceptions. As a result of the immediate shift to an online learning platform caused by COVID-19, steps should be taken to develop a better understanding of the influences impacting student satisfaction (Ho et al., 2021). Learning institutions were forced to switch face-to-face courses to remote learning for an unpredictable length of time because of the pandemic. Online learning is not a new concept, however. In fact, over 6 million students were enrolled in at least one online course in the United States before the pandemic (Palvia et al., 2018). The pandemic has led higher education institutions to reevaluate the support services necessary to improve student perception (Ramírez-Hurtado et al., 2021).

At the start of the pandemic, the education system had no idea how long face-to-face learning would be on hold. Emergency remote learning was initiated to fulfill education obligations for learning to continue (Ho et al., 2021). The pandemic caused an increase in the use of digital technology including video conferencing applications with screen sharing capabilities to bridge the gap between online and face-to-face learning (Sun et al., 2020). To maximize students' satisfaction learning institutions must determine appropriate workloads, learning activities, and effective content implementation methods (Ho et al., 2021). Further research is necessary to determine the impact of grading structures and how the cancellation of on-campus activities affected students' satisfaction and online performance during the pandemic.

Students' Online Performance

COVID-19 disrupted education globally leading to an immediate transition to remote learning across the world. Due to local government actions, many countries decided to suspend face-to-face learning (Gonzalez et al., 2020). Students referred to their course materials and textbooks in addition to meeting with professors virtually using a video conferencing application from their computers at home. Learning management systems (LMS) were utilized as a platform for teachers to post additional course material and interact with students asynchronously. The pandemic provided an opportunity for teachers to evaluate how digital technology can support instructor-to-student interaction to facilitate learning (O'Regan, 2020). Developing positive relationships between the instructor and students will result in better learning outcomes (Kusumawati, 2020). Online education generally focuses on student-centered learning providing deeper and more meaningful learning opportunities to enhance the experience and student performance.

Learning management systems have become popular across the globe as an effective digital-based instructional method for improving learning outcomes in higher education (Aldiab et al., 2019). Students were able to collaborate with peers by using the digital tools offered by the LMS such as the discussion board. The immediate transition to remote learning presented many challenges for face-to-face learners (Kapasias et al., 2020). Some of the challenges were related to face-to-face teaching strategies used to conduct online lectures (Ramírez-Hurtado et al., 2021).

Student effort typically shows evidence of academic improvement. As a result of the immediate transition to remote learning caused by COVID-19, instructors rapidly assigned work disturbing the balance between effort and outcomes (Motz et al., 2021). In a qualitative study using 6,156 students, Motz et al. (2021) examined the relationship between effort and outcomes. Data was gathered by using a large-scale survey in addition to assessment data provided by the school's LMS and estimated cumulative performance from the courses. Instructors must evaluate teaching practices if learning outcomes are insufficient (Kusumawati, 2020). Interactive learning activities are a better predictor of student learning outcomes than passive learning activities (Wekerle et al., 2020).

Remote learning requires students to perform learning activities outside of the traditional face-to-face classroom. Prioritizing meaningful learning activities aligned with learning goals is necessary to increase student effort and achievement. Student engagement is another important component of effective teaching practice for online education (Gamage et al., 2020). The results of the study showed an increase in assignment volume decreases learning productivity. Greater consideration must be given to how online courses can be structured to support student achievement (Flynn & Noonan, 2020).

A qualitative study conducted by Moussa and Ali (2021) examined the level of happiness among higher education students and the impact on academic success. Many theories exist to help people understand and achieve happiness including hedonism, desire, objective list, and authentic happiness theories. The goal of education is academic success and many researchers have used these theories to study the relationship between happiness and success (Moussa & Ali, 2021). Happiness and satisfaction may be the key to academic success among higher education students. Online teaching and learning are under increased scrutiny because of COVID-19 with the challenges faced by educators and students to improve the quality of online education being examined worldwide (Bennett et al., 2018).

Prior research has suggested successful people are typically happy and motivated to succeed, and those who experience anxiety and distress tend to have low academic performance (Saggino et al., 2017). The COVID-19 pandemic had a negative effect on an individual's levels of happiness. Moussa and Ali (2021) noted higher education students were at a greater risk of experiencing a decline in the level of well-being caused by the pandemic. Based on findings from the Oxford Happiness Questionnaire administered to 232 students at a university in the United Arab Emirates (UAE), the UAE has increased its significant efforts to ensure citizens achieve happiness. As a result, higher education students exhibited high levels of happiness and academic success (Moussa & Ali, 2021).

Blended learning is a teaching method combining online instructional methods with traditional face-to-face teaching strategies. COVID-19 eliminated the ability of teachers and students to interact in the classroom resulting in immediate changes to teaching and learning. Academic courses with a laboratory component were challenged to find active distance education methods to support student learning of technical hands-on skills. Likewise,

engineering courses that typically have a laboratory component requiring students to interact with equipment and instruments to perform experiments struggle (Ożadowicz, 2020). Laboratory restrictions during the pandemic forced educators to organize lessons and exchange course information remotely. The pandemic forced government and education leaders to reevaluate alternative methods for teaching and the need to modernize teaching strategies by including blended learning and digital-based technology. Blended learning has become a preferred distance education model for educators and students (Alqahtani & Rajkhan, 2020).

The pandemic forced educators to discover creative ways to teach using online resources including social media platforms. Although institutions may have had learning management systems with tools suitable for academics, many teachers were unfamiliar with the technology (Ghounane, 2020). A qualitative study conducted at a university in Algeria examined whether social media platforms are more effective for motivating students to learn than learning management systems. Social media is an integral part of today's world and the lives of students. Combining social media platforms and learning management systems may increase student motivation resulting in improved learning outcomes. Social media platforms are frequently used by college students and have the potential to become lifelong learning platforms for anyone who has access (Albashtawi & Al Bataineh, 2020).

COVID-19 caused students who were enrolled in face-to-face courses to immediately transfer to remote learning without a choice. An increase in anxiety due to unpredictable circumstances resulted. Many students reported a loss of motivation in addition to difficulties staying on task (Hasan & Bao, 2020; Purwanto, et al., 2020). According to Ghazi-Saidi et al., 2020, although students forfeited face-to-face interactions with course instructors and their peers most students agreed the virtual interaction was as effective as face-to-face courses. Faculty who

were using learning management systems before the lockdown were able to transition easier. Remote courses can be more effective due to the availability of digital-based instructional technology (Ghazi-Saidi et al., 2020).

Before the pandemic higher education institutions had been moving more towards online learning platforms (Ali, 2020). The immediate transfer to online learning caused governments and schools to evaluate several factors including faculty self-efficacy, student accessibility, and student motivation. Disagreements exist with regard to how to teach and the appropriate workload for students (Zhang et al., 2020). Limitations exist regarding teaching strategies, online teaching experience, and the skill level required to use the institution's learning management system (Smith & Kaya, 2021). Attention must be given to these limitations to ensure students are receiving high-quality instruction to support learning and avoid compromise. Careful consideration and decision-making must be undertaken by all stakeholders to ensure the quality of online education using blended strategies and new technologies (Ali, 2020).

Globally, education drives development. Education provides the skills students need to critically think and problem solve. Technology enhances these important skills and builds student confidence by improving methods for teaching (Ananga, 2020). Technology has caused the greatest change in distance education courses, which were originally called correspondence courses. Appropriate teaching strategies and instructional-based digital technologies must be employed to engage students to facilitate learning. Pedagogy means inducing changes in the learner through interactions with the teacher and the learning environment (Ananga, 2020). Online learning requires technology and self-motivation in addition to the social interaction between students and the course instructor. The level of social and interpersonal interaction should be examined to determine the influence on students' perceptions (Joia & Lorenzo, 2021).

Higher education institutions should focus on improving the infrastructure necessary to conduct online education courses effectively and efficiently to improve digital literacy skills.

Digital Literacy

Digital literacy is an essential 21st-century skill that must be taught to students to exist in a global economy (Divya & Haneefa, 2018). Teaching students about digital literacy will help create responsible consumers by developing an understanding of online privacy and security issues and improving the ability to use the information to evaluate and communicate globally. Digital literacy teaches students how to be responsible by developing an understanding of the limitations of technology and safety precautions it might require. Digital skills incorporate a wide range of abilities including digital devices, communication applications, and networks to access and manage information. To become digitally literate an understanding of how to navigate and find information online is essential (Udoewa et al., 2016).

Educators at a school in Western Australia in 2019, implemented a digital literacy framework using digital technologies in their classrooms (Owen, 2020). As a result of a commissioned research project initiated in response to mandated state requirements in 2017, schools examined methods for including digital technology into the school curriculum. To facilitate an understanding of concepts the Montessori method of education theoretical framework was employed. The results of the study showed if there is a “whole school” approach and all stakeholders are committed to authentic and meaningful pedagogy, the implementation of digital technology into the curriculum to improve student digital literacy skills will be successful (Owen, 2020). Successful online learning depends on the teacher’s level of digital competence and the school’s support (Joia & Lorenzo, 2021).

A qualitative study conducted by Divya and Haneefa (2018) provided insight into the digital reading competencies of 525 university students from Kerala. Components of the 21st-century skills theory were used as the study's theoretical framework. The study revealed most of the students had a medium level of competency (males higher than females). They also noted that based on their findings there is a relationship between digital reading competency and the level of competency with how to use digital devices. Technologies influenced student learning in addition to their level of reading competency (Divya & Haneefa, 2018; Zalat et al., 2021). Today's student is most likely to read academic material from a screen. Students should have a combined high level of competency using digital devices and linear reading skills to improve the quality of their academic work.

A qualitative study conducted by Udoewa et al. (2016) examined the beliefs, hopes, fears, problems, and difficulties of the inability to gain access to the internet in diverse communities. Education must teach students the skills necessary to improve digital literacy to exist in a growing world of technology (Udoewa et al., 2016). Brick and mortar libraries are no longer properly equipped with current material unless they provide digital access. One of the challenges students have with digital literacy is access to the internet and digital devices. Educational outreach initiatives must find solutions for students to gain access to the internet by providing equipment and connectivity to diverse communities. For students to become digitally literate they must learn how to navigate the internet to take advantage of the materials that can only be found online (Udoewa et al., 2016). Accessibility and inclusivity are important components of the online learning environment (Nordmann et al., 2020).

Globally, online education has been offered by many institutions as a method of convenience and revenue. Massive open online courses are offered at institutions around the

world to form an open education network (Bao, 2020). The COVID-19 outbreak forced institutions to launch synchronized courses to continue the learning process off-campus. Faculty experienced many challenges with the transition in addition to the difficulty students had with out-of-classroom learning. The quality and rigor of online learning should be aligned with student behavior characteristics (Bao, 2020). COVID-19 has offered significant opportunities to evaluate effective online pedagogy methods to facilitate learning (Crawford et al., 2020). The pandemic revealed regions of the world with limited resources and access to digital technologies. Institutions that had online tools such as Microsoft Teams, Skype, and WebEx found these tools enhanced digital instruction (Molnár & Sik, 2020). Educators often failed to explore the potential of digital technology and its effects on the learning environment (Derboven et al., 2017).

Many institutions are bound by traditional face-to-face learning methods. There is strong evidence to support online education is as effective as face-to-face education (Nguyen, 2015). Although many institutions have incorporated blended learning methods into the classroom, the commitment to traditional methods of learning still exists (Dhawan, 2020). A blended learning approach was successfully implemented in anatomy instruction using online lectures and dissection videos (Yoo et al., 2021). The mixed-methods study conducted by Yoo et al. (2021), compared online exam scores of 104 students. The research suggests a blended learning approach is an effective method for online learning due to an increase in self-directed study.

Across the globe, COVID-19 forced learning institutions globally to delay learning for a brief period because of uncertainty about how education should proceed during the pandemic. Online education has been challenged by many educators. Contrary to negative prevailing opinions, the pandemic had positive consequences on online education (Ożadowicz, 2020). Before the pandemic, the world could not have imagined a time when the education system

would be dependent on technology as the only method for teaching and learning (Dragomir & Munteanu, 2020). As a result, teachers have continued to use traditional methods and hesitate to accept change. Teachers around the world, especially those in developing countries expressed the lack of technical know-how in content delivery and assessments coupled with an increase in student anxiety with the technology as well (Sasere & Makhasane, 2020).

Digital technology provides an opportunity for the implementation of new teaching and learning strategies (Dragomir & Munteanu, 2020). Online learning also requires a certain level of pedagogical content knowledge to design and organize an effective learning environment (Rapanta et al., 2020). The immediate transfer to an online learning platform increased the stress and workload of higher education faculty members. Teaching educators of all ages how to teach from home was a challenge for many universities and colleges. In many cases, teachers were faced with a lack of digital knowledge capabilities compounded by a reduction in technical support (Rapanta et al., 2020). Technology requires awareness as to how an educational tool will interact with students (Derboven et al., 2017).

Learning any place at any time has become possible because of digital technology. E-learning is instructional-based digital technology that incorporates LMS, video conferencing applications, and websites to enhance learning for all students (Rhode et al., 2017). Effective tools for blended learning are available on the internet free of charge (Shahzad et al., 2020). Many institutions around the world do not have access to LMS, especially in developing countries. The lack of access to LMS limits the ability of teachers to communicate with students. Teachers and students can use social media as a method for creating an online learning community (Sobaih et al., 2020). Social media could be used as a method to promote online education to facilitate learning.

The pandemic caused a dramatic change in teaching and learning. An e-learning approach was suddenly implemented resulting in technology challenges for students globally. E-learning has many advantages including increases in pedagogical innovation, collaborative, and student-centered learning opportunities in addition to a rich source for feedback (Dragomir & Munteanu, 2020). A qualitative study investigating distance education in Morocco during the COVID-19 surveyed 3,037 students enrolled in higher education programs (El Firdoussi et al., 2020). The study examined four major dimensions impacting distance education including economic, psychological, social, and environmental. Before the pandemic, Morocco's government organized a digital initiative to enhance the infrastructure over 8 years.

Educational institutions globally responded to the immediate transfer from the traditional teaching and learning platform to delivering teaching and assessments remotely (Nordmann et al., 2020). According to El Firdoussi et al. (2020), Morocco was one of the first countries to switch to a distance education platform without having sufficient key factors in place to support academic success. One key factor was the technology caused technical challenges for the students due to equipment and internet connectivity issues. Online learning requires the latest technology to enhance the learning environment for students (El Firdoussi et al., 2020). Attention should also be directed toward the level of student satisfaction and the quality of teaching as a fundamental component of distance education (Nordmann et al., 2020).

Technology should not be the exclusive reason why students were challenged by online learning during the pandemic (Kumar, 2020). The assumption is more technology will lessen pedagogical problems. Online learning provides an opportunity for students to learn at their convenience. Distance education courses must align competencies for learning with the online platform (Toquero, 2020). The internet, connectivity, and device access were challenges students

faced because of COVID-19 (Katz et al., 2021). A qualitative study conducted by Katz et al. (2021) examined 2,913 U.S. undergraduate students to determine how prior and current experiences with digital technology affected remote learning during the spring 2020 term. Digital inequality was an issue during the pandemic for many students throughout the United States (Katz et al., 2021). Many students depended upon campus internet and devices to complete course assignments before the pandemic.

A qualitative study conducted by Abdulrahim and Mabrouk (2020), investigated the effects of advanced technologies and LMS to improve student learning outcomes in addition to enhancing the teaching capabilities of the faculty. A survey method was implemented to examine how digital transformation affects learning outcomes for 125 higher education students. The university implemented an advanced digital technology system as the main mode of learning. The study's findings support instructional-based digital technology as an effective method for improving learning outcomes and productivity. The implementation of technologies and methods for teaching teachers must be constantly monitored to measure the effects on student learning outcomes (Molchanova et al., 2020). One limitation of the study was most of the students who complete the survey were humanities and science majors. Further research is necessary to generalize the results across all higher education majors.

The immediate transfer to a remote platform forced professors to adapt quickly to a new form of teaching. Remote communication was dependent upon email and other social media applications (Molchanova et al., 2020). Challenges continued when teachers needed to upload course documents and create online exams. If available, most faculty uploaded course material with the assistance of the online support team at the school. Professors also relied on a video conferencing application to present lectures in real-time. The implementation of a variety of

interactive teaching methods and communication was an immediate response to the pandemic except for the resources that were not available in a digital format (Molchanova et al., 2020). Strategies are required for the successful implementation of online learning in the 21st century (Zalat et al., 2021).

Digital literacy is an important component of learning in the 21st century for students to exist in a global economy. A study conducted by Kamsker et al. (2020) identified two challenges students faced with the immediate transfer to remote learning including access to high-speed internet and functional digital devices. In some cases, the inability to access the internet was because the internet provider canceled service due to unpaid statement balances in addition to broken devices. The results of the study revealed the importance of ensuring students have digital connectivity and a functional device. Identifying digital competency levels is necessary to determine methods for improving digital literacy (Kamsker et al., 2020). The focus of the pandemic should be to promote ongoing change in education (Nordmann et al., 2020).

Global restrictions caused by the COVID-19 pandemic forced educational institutions to provide online services to more than 60% of students around the world (Alqahtani & Rajkhan, 2020). There are critical success factors institutions must consider to understand what worked and what did not during the unexpected transition to remote learning during the pandemic. Educators neglect to explore all the possible options regarding the virtual learning environment and only incorporate a limited amount of the available tools (Derboven et al., 2017). COVID-19 continues to be a global threat resulting in the inability of learning institutions to return to face-to-face education.

Institutions that were already invested in distance education had an advantage over those who were unable to switch smoothly due to the lack of distance education experience. Questions

have been raised as to whether learning institutions and educators realize the potential of digital technology (O'Regan, 2020). Pre-pandemic distance education courses experienced no difficulty with online learning during the pandemic lock-down and social distancing rules compared to face-to-face courses that were extremely affected by the unplanned event. Distance education is becoming an important aspect of learning, which is why schools need to understand and prioritize methods for improving teaching and learning outcomes for teachers and students (Alqahtani & Rajkhan, 2020). Faculty are a key aspect of online education in addition to technology and the infrastructure. Technology extends learning beyond the scheduled class time (Kusumawati, 2020). Learning management systems are an important component for students to access and share course material. Effective systems and support are necessary to facilitate a student-centered learning environment and ensure academic success (Pedro & Kumar, 2020).

A descriptive study conducted by Andriivna et al. (2020) investigated EdTech as an effective method for the transition from face-to-face courses to fully online courses. Based on the United States National Education Technology plan (2017), there is a call to integrate personal and professional advanced technologies into the education system to improve digital literacy skills for students. The plan outlines how the government will support schools to improve the educational technology environment by providing access to high-speed broadband, lower price points for digital devices, technical support for faculty and students, and instructional practices focusing on the development of responsible digital citizens. The plan is based on research supporting the use of technology by young learners to improve 21st-century digital literacy skills for all students (South et al., 2017). Teaching and assessments aligned with instructional-based digital technology have been shown to enhance the learning environment (Andriivna et al.,

2020). Technology enabled teaching and learning were able to continue throughout the pandemic.

Student learning can be positively impacted by incorporating digital technology into education (Wekerle et al., 2020). Technology facilitates student engagement when the technology is incorporated into passive and active learning activities. Active, constructive, and interactive teaching strategies blended with digital technology have been shown to improve higher education student learning outcomes (Wekerle et al., 2020). A study conducted by Babelyuk et al. (2021) revealed digital proficiency levels should be considered before selecting a digital active learning activity. Educators should gain a better understanding of how to integrate higher-order interactive activities with instructional-based digital technology to enhance the learning environment and improve student academic achievement (Chi et al., 2018).

The pandemic forced educators to rapidly switch to a remote learning platform with minimal knowledge of how to do so. Over the last decade, there has been a dramatic growth in online learning (Yu, 2021). A qualitative study conducted by Johnson et al. (2020), surveyed 897 faculty and administrators from 672 higher education institutions across the United States. Online teaching experiences varied making the transition challenging for many educators. Limited knowledge of digital technology was one of the main reasons why faculty were challenged by the immediate transition (Johnson et al., 2020). Regardless of the level of online teaching experience faculty were required to learn new teaching methods appropriate for the online platform. Faculty and administrators identified student online support, and access to digital instructional material as two of the greatest challenges (Johnson et al., 2020).

Digital literacy has application to this study as a method to identify the impact COVID-19 had on students' perception of online learning. The immediate transfer to remote learning

caused challenges for students and teachers and digital technology was one of the main reasons. The results of a study conducted by Cabero-Almenara et al. (2021) revealed the importance of distance education training to support the effective use of digital technology and the availability of digital resources. Digital literacy is an important 21st-century skill for students to be successful personally and professionally. Schools must provide professional development opportunities so that teachers can learn effective methods for teaching students how to improve digital literacy skills. Improving digital literacy skills will build upon students' strengths in a continued effort to facilitate growth (Kuehl, 2018).

Chapter Summary

The literature review highlights the challenges COVID-19 placed on the global education system and how institutions, educators, and students had to cope with the immediate transfer to remote learning. The major themes identified in the literature review include student perception, student online performance, and digital literacy. Challenges included lack of experience with instructional-based digital technologies, student engagement, motivation, and teacher presence. The research supports positive student perception regarding online learning in addition to the need for professional development and access to effective instructional methods to facilitate learning (Adnan & Anwar, 2020).

Effective course design plays a significant role to enhance the learning environment for students. Higher education learning management systems typically have digital tools to enhance online communication between the course instructor and the students. Instructors are encouraged to use communication tools to engage and interact with students to improve learning outcomes (Roache et al., 2020). Continuous interactions between the course instructor and the students will result in better learning outcomes (Kusumawati, 2020). This proposed study was necessary to fill

the gap between online learning experiences and the effective use of instructional-based digital technology to align curriculum at higher education institutions in the United States.

Chapter 3: Methodology

Educators demonstrate a lack of experience with effectively using instructional-based digital technology to engage students at higher education institutions in the United States. Higher education students' perception of online education has been affected (Adnan & Anwar, 2020). The problem is more than one-third of college students feel disengaged and demotivated when learning online during extreme or unforeseen circumstances, resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). The purpose of the qualitative descriptive study was to explore students' perceptions and feelings of motivation, engagement, and learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York.

Motivation and engagement are defined as processes causing an individual to act or behave in a particular way. Motivation and engagement influence students' perception of online learning and improves satisfaction levels (Rad, et al., 2021). As a result of the research, higher education institutions will develop an understanding of how to implement instructional-based digital technology to motivate and engage students while studying online to improve learning outcomes. The following research questions guided the study:

Research Question 1: How do students at a large suburban community college on Long Island in New York feel about the online learning experience under extreme or unforeseen circumstances?

Research Question 2: How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?

Research Question 3: What are the perceptions of students at a large suburban community college on Long Island in New York about online performance and engagement when studying under extreme or unforeseen circumstances?

A discussion about the research methodology, design, and rationale begins the chapter. The chapter continues with a description of the role of the researcher, research procedures, data analysis, reliability, and validity. Ethical procedures and a summary will conclude the chapter.

Research Methodology, Design, and Rationale

Choosing an appropriate research methodology depends on the approaches used by other researchers in the field of study and the research questions. The qualitative research methodology involves analyzing data to develop an in-depth insight into a problem and interpret human behavior (Aspers & Corte, 2019). As an approach, qualitative methodology was applied to collect data on peoples' perceptions to provide a mental association to an event. Self-inquiry aiming to find an underlying meaning of human experiences is the focus of qualitative research (Mihalache, 2019). Methodologies help researchers understand the future effects of an event providing an insight into human behaviors.

Methodology

In qualitative research, attempts to understand the meanings of the lived experiences exist. The methodology provides a deeper insight to explore the lived experiences and why humans behave in a certain way by collecting and analyzing non-numerical data (Barnham, 2015). Based on prior qualitative research, the study will explore students' perceptions of online learning and the influence digital technology, instructional content, and assessment quality had on student motivation and engagement.

Design

A descriptive research design was implemented to capture the perceptions of online learning for community college students at a large suburban community college on Long Island, New York. The descriptive design was used to understand the event and human experiences of an event (Tenny et al., 2020). The rationale for the descriptive design to answer the research questions was based on the philosophical perspective of how an individual perceives the phenomena (Qutoshi, 2018). Finding commonalities in the participants' shared experiences was the primary goal of the study.

Collecting students' perceptions can provide insight into how to improve engagement and motivation while studying online. Unlike the grounded theory design, a descriptive study will help to understand the commonalities among the lived experiences of the participants involved as a basis for future research (Rahman, 2017). Another design consideration for the study was narrative research, which was deemed unsuitable due to the focus on a single individual's story. Limitations of the descriptive design will include interpretation of the results, participant articulateness, and time required to conduct and analyze the in-depth interviews.

As a qualitative approach to investigation, descriptive design has advantages and disadvantages. A disadvantage of descriptive research is difficulties with data analysis and interpretation. Descriptive research focuses on meanings and experiences with the potential of overlooking contextual sensitivities (Rahman, 2017). Lower levels of validity and reliability could result in extending the time required for data collection (Tuffour, 2017). The descriptive design relies on the participants' accounts of the event and whether the experience can be communicated effectively.

The benefit of using a descriptive design is the ability to provide a level of understanding of the experience and meaning of an event making descriptive research an appropriate design for the study. The rationale is descriptive research uses scientific measures and observations to examine the meaning of the event (Picton et al., 2017). According to Husserl (1859-1938), the data collected through a descriptive approach is more natural. The research attempts to search for patterns to generate meanings, relationships, and an explanation of the event.

Role of the Researcher

The role of the researcher is to safeguard the participants and data collected throughout the research process. As an observer in descriptive research, the role was to interpret data and administer the research instrument, data collection, and analysis. The job position at the community college research site could have caused a relationship risk raising ethical concerns (Sanjari et al., 2014). If familiar names appear during the recruitment process, participants were eliminated to minimize bias. The dual position of instructor and observer was highly unlikely to affect the study's procedures.

The participants were recruited from a large suburban community college on Long Island, New York. A professional or personal relationship can exist between an adjunct professor and an instructional designer at the research site. Attempts were made to mitigate the potential risks associated with previous or future relationships with the study's participants (Hamza et al., 2021). Students were selected on a voluntary basis in unassociated fields of study with explicit inclusion and exclusion criteria following Institutional Review Board approval.

Ethical issues are apparent at all stages of research. Challenges include anonymity, confidentiality, informed consent, and potential impact between the researchers and participants (Sanjari et al., 2014). Privacy issues and avoiding misrepresentation were addressed while

working with participants within the work environment to mitigate the possible risk of developing informal relationships. The informed consent form specified how data was collected and how it would be utilized before the start of the study. Another ethical concern is whether to use an incentive to boost recruitment. Incentives can potentially lead to biased enrollment and exploitation of the participants. Incentives were not used for the study.

Potential variables affecting reliability and validity were considered. Reliability refers to the quality of collecting data, and validity refers to the degree of credibility. Data adequacy and data appropriateness were a major focus to reduce concerns related to reliability and validity (Spiers et al., 2018). The primary source for data collection was scheduled in-depth interviews. Careful planning and execution before and during the interview process ensured the information was obtained accurately.

Research Procedures

The explanation of the study's research procedures including a definition of the population and the estimated total size begins the section. The study's sample size and a rationale were provided along with a description and justification for the sampling strategy. Inclusion and exclusion criteria for the sample selection and the site permission procedures were discussed. An explanation of how participants were contacted and informed about the study was provided in addition to how consent was obtained.

Population and Sample Selection

A total of 10,500 community college students were enrolled in 20 fields of study (excluding AHS and HPED) from a large suburban community college on Long Island, New York, and served as the study's target population. Using a target population allowed for adequate screening to meet the participation criteria and generate the study's sample size. Sample size is a

smaller representative number of the target population (Chivanga & Monyai, 2021). The distribution of ethnicity among the target population included White (35%), Hispanic/Latino (30%), Black or African American (21%), Asian (7%), and other (7%). The gender distribution is 49% of the student population were males, and 51% of the student population were females between the ages of 18 to 21.

To account for attrition, data adequacy, and saturation the sample size generated from the target population was 20 with a minimum of 15 participants. Attrition is the loss of participants during the study that may result in attrition bias (Nunan et al., 2018). Data adequacy refers to sample size sufficiency possibly threatening the validity and generalizability of the study. Saturation is the point in the research process when data collection no longer offers new or relevant information (Vasileiou et al., 2018). Convenience sampling is a common strategy used in qualitative research. The strategy is based on gathering information from participants who can be conveniently accessed by the researcher (Andrade, 2021). Convenience sampling was employed to choose eligible participants for the study.

Inclusion and exclusion criteria qualify or disqualify a potential research participant. The inclusion and exclusion criteria vary depending on the study (Huls et al., 2018). The participation inclusion criteria included students enrolled in courses at the community college between January 2020 and the fall 2021 semester. Exclusion criteria include prior relationships with interested participants due to the potential risk of interfering with the success of the study or unfavorable outcomes.

Site permission was obtained from the community college's Institutional Review Board (see Appendix A). Obtaining site permission was an important step to ensure the risks to participants were minimized (Davis, 2018). Once the American College of Education (ACE) was

granted the Institutional Review Board approval (see Appendix B), the community college considered the site permission request at the next scheduled Institutional Review Board meeting, contact was established, and the college's site permission form was completed (see Appendix C).

Demographic information was collected for screening purposes and to determine whether the participants were eligible to participate (see Appendix D). Participants' information was stored on a password-protected laptop once the recruiting information was entered (Hammack-Aviran et al., 2020). Alternative methods of recruitment included sending an invite to students who were not enrolled at the community college then but were students between January 2020 and the fall 2021 semester.

Written consent protects the participants' rights and ensures the participants have a clear understanding of the research (Kraft et al., 2017). The informed consent document contained a full explanation of the research design, objectives, procedures, benefits, and subject's rights (see Appendix E). The prospective participants received the form via email taking approximately ten minutes to review and to provide a signature to acknowledge the informed consent. It was returned via email and the information was kept private and confidential by using fictitious names on the research data collection documents.

Instrumentation

Various instruments are used to collect qualitative data including focus groups, in-depth interviews, and surveys. The selected instrument for the study was an in-depth interview. An in-depth interview is a qualitative research instrument involving semi-structured interviews. The purpose of semi-structured interviews was to explore online learning experiences for community college students (Schnittker, et al., 2018). A description of the data instrument and the steps involved in conducting a field test were discussed.

Interviews

A qualitative research instrument is used to obtain information from the participants about the perceptions and experiences of an event. The primary instrument for data collection in descriptive studies is a semi-structured interview (Al-Salman & Haider, 2021). The interviews were semi-structured with open-ended questions to guide the collection of students' perceptions of online learning.

In-depth interviews involve direct engagement with the participants, and additional questions can be asked based on the participants' responses to the initial interview questions. During the development of the research instrument a variety of questionnaires designed for similar purposes were examined (Al-Salman & Haider, 2021; El Firdoussi et al., 2020; Ince et al., 2020). The approach used to develop the interview included ensuring the interview questions aligned with research questions, constructing an inquiry-based conversation sequence, and using open-ended questions (Castillo-Montoya, 2016).

The interviews consisted of six open-end questions with follow-up questions lasting approximately 75 minutes about students' perceptions of online learning (see Appendix F). The six questions were intended to answer the research questions (RQ) in the following order: Questions 1 and 2 were intended to answer RQ 1, Questions 3 and 4 addressed RQ 2, and the final two interview questions were intended to answer RQ 3. The rationale for developing the instrument was to focus on the population of students enrolled at the community college in a suburban setting. Students' perception of online learning was the main construct of the interview questions. The interview protocol consisted of a four-phase process (see Appendix G).

Instrument Validation

A field test is conducted when an instrument needs to be validated. Validation determines whether the instrument is suitable for the population under study (Zamanzadeh et al., 2015).

Instrument content validation was conducted using subject matter experts (SMEs). Subject matter experts are experts in the field of study with at least 3 years of experience. Four SMEs are employed at the community college. Each SME received an invite via campus email with the open-ended interview questions as an attachment. The SMEs were informed of how and why the research instrument was developed and asked to review the interview questions for content. The suggestions provided by the SMEs were integrated into the final version of the interview protocol (see Appendix H).

Data Collection

The data collection process began after obtaining Institutional Review Board approval. Once Institutional Review Board approval was received, recruitment began (Harger & Quintela, 2017). Potential participants received a recruitment letter via email (see Appendix I). Participants who expressed an interest in participating in the study received an email with the screening information link. Demographics were collected using Google Forms to screen potential participants. Students were sampled to ensure the selected individuals were representative of the total population (Gentles & Vilches, 2017). Once sampling was completed the recruitment process was stopped, and interviews were scheduled.

Obtaining informed consent was the next step in the process. Once the screening process was completed, eligible participants received an email containing a link to the informed consent document. Research participants should be properly informed and understand respect for individual autonomy (Nembaware et al., 2019). Participants were asked to review and accept the

informed consent form. A Zoom meeting was scheduled to provide participants with an opportunity to ask questions.

Interviews were scheduled via email and conducted using Zoom at the participants' convenience in 75-minute blocks of time. Data was collected by using Zoom's audio recording and transcription features and saved on the researcher's password-protected laptop. The regulations provided by the U.S. Department of Health and Human Services (HHS) were closely followed to ensure the participants were protected throughout the research process (U.S. Department of Health & Human Services [HHS], 2018).

Once the interview process was completed, the audio recordings and transcriptions were downloaded, encrypted, labeled to differentiate each participant, and stored on a password-protected laptop for 3 years in accordance with federal regulations (45 CFR 46). At the end of 3 years, the data will be destroyed by deleting the information. The recycle bin will be emptied to ensure the data is completely removed from the laptop. Hand-written notes will be stored in a locked file cabinet using fictitious names and shredded at the end of 3 years in accordance with federal regulations. A thank you email notifying the participants the research has ended served as the study's exit strategy (Morrison et al., 2012). Participants received a second email once the study's results were available.

To convert raw data into a meaningful format and enhance the credibility of the results data were prepared for analysis (Aguinis et al., 2019). Data validation is the first step to ensuring the data is collected without bias. The verification process includes fraud (participants were interviewed), screening (participants were chosen based on research criteria), procedures (data collection procedures were followed), and completeness (the researcher asked the participants the complete list of interview questions). After becoming familiar with the data by reading it

several times to identify patterns and to ensure the wording is accurate, the data was ready for analysis.

Data Analysis

The data analysis process in qualitative studies is used to find patterns, connections, relationships, and meaning. Thematic analysis (TA) is a qualitative evidence-based approach to examine the lived experience and to extract meaning from the data (Rugwiji, 2020). Unlike transcendental phenomenological analysis (TPA), TA is the preferred approach for examining complex and ambiguous personal lived experiences. Coding is also part of the data analysis process used to identify concepts. The concepts are coded to structure and label the data. Once the data was coded, themes were assigned by identifying patterns to answer the research questions.

Organizing Data

Single-person audio recordings were transcribed in a Microsoft Word document. Document memos were used to describe the context of the interviews. Keeping memo records was helpful when reporting the research findings (Kuckartz & Rädiker, 2019). The interview transcripts were read multiple times to achieve familiarization with the raw data. Each transcript was proofread before being imported to MAX Qualitative Data Analysis (MAXQDA) for data analysis. MAXQDA is a tool used for qualitative research to gain insight from written or text documents.

Model for Analysis

Thematic analysis (TA) is an evidence-based approach seeking to interpret the perceptions of the participants. TA is a preferred approach for examining complex and ambiguous personal lived experiences. MAXQDA is software for data analysis supporting

several file formats including text and audio (Kuckartz & Rädiker, 2019). The software was used to compare single-person transcripts to analyze and interpret the TA data. Single-person transcripts were imported to MAXQDA, and the software's coding system was used to label and index transcript content.

Examining, Coding, and Categorizing

Deconstructing the data and coding for understanding is an essential process of data analysis. Synthesizing the data allows the researcher to link ideas to find how statements are related to one another. Emerging themes were then categorized to answer the research questions. Once the transcriptions were coded a content analysis of the data was performed. Sub-categories were created. Categories and sub-categories were organized and cross-examined using MAXQDA's coding system (Gizzi & Rädiker, 2021). The MAXQDA visual tools including document portrait, code matrix browser, and code relations browser were used to compare all summarized data in terms of categories.

Reliability and Validity

Qualitative research attempts to interpret the meaning of lived experiences. Reliability and validity are key aspects of all research especially in qualitative research due to how the data is interpreted (Spiers et al., 2018). The purpose of the research was to arrive at a valid conclusion without bias or opinion. Reliability refers to the repeatability or the consistency of the research findings. Validity refers to how trustworthy or credible the research data is in representing the phenomenon.

Credibility and Dependability

Credibility refers to how believable or trustworthy the research findings are based on the information collected from the participants. Major threats to the credibility of a study include

researcher and participant bias (Sherif, 2018). The strategies typically used to ensure credibility include member checking, prolonged engagement, persistent observation, saturation, and triangulation. The strategy employed for this study was member checking by reading the information collected many times and reviewed by the participants to ensure data accuracy.

Dependability refers to how consistent and reliable the research findings are based on the data collection. To ensure dependability research procedures and findings were overt and properly recorded (Sanjari et al., 2014). Additionally, code-recode procedures were implemented to ensure the dependability of the data. After the data was coded and two weeks had passed, the data were recoded and evaluated for consistency. Strategies typically used to ensure dependability are reflexivity and audit trail. An audit trail was employed to transparently describe the research steps throughout the process.

Transferability

Transferability is the degree to which the study results can be generalized. The degree of generalizability provides evidence the research findings could be applied to other events or populations (Munthe-Kaas et al., 2019). To ensure the study's results were transferable, details were provided regarding the research context including any assumptions made throughout the research process. Strategies to enhance the trustworthiness of a study are thick description and variation in participant selection. The strategy for this study was thick description by having participants describe the context of the experience to provide meaning for outsiders.

Trustworthiness

Trustworthiness in qualitative research is the degree to which the study can answer the research questions. The quality, authenticity, and truthfulness of the research findings determine the trustworthiness of qualitative research and the time spent with the participants to develop an

understanding of the phenomenon (Ezzat Khamis Amin et al., 2020). A strategy to enhance the trustworthiness of the study is eliminating and reducing bias. The participant's and researcher's opinions are not credible unless the information is based on fact or an informed opinion. To ensure the research is trustworthy, measures were taken to account for personal biases. Sampling biases were acknowledged to ensure the data collection and analysis were relevant to the study.

Ethical Procedures

To ensure the extraction of reliable data, applying stringent ethical procedures during all phases of the study is recommended. The nature of qualitative research can be ethically challenging in all stages of the study due to the interactions between the researcher and participants (Sanjari et al., 2014). Three basic ethical principles of The Belmont Report (U.S. Department of Health and Human Services [HHS], 1979) were applied. The principles include respect for persons, beneficence, and justice (HHS, 1979). The report was used as a guide to resolve ethical issues arising during the research process involving human subjects.

Respect for persons describes how individuals should be treated as autonomous agents. Lack of respect for an autonomous agent is refusing to consider the participants' judgments, denying freedom, or withholding information (HHS, 1979). To ensure respect for persons, participants entered the research voluntarily and with detailed information about the study.

Beneficence addresses how individuals should be treated ethically by considering the participant's decision and protecting them from harm and securing their well-being. The researcher's responsibility is to determine when the study's risks outweigh the benefits (HHS, 1979). To ensure beneficence during the research process efforts were made to protect the well-being of the participants and to reduce the potential of causing harm or exposure to risks.

Justice addresses fairness in distribution. Burdens and benefits should be distributed equally, according to individual need, effort, societal contribution, and merit (HHS, 1979). Careful consideration was given to ensure benefits were not denied without good reason or the burden was imposed to an unwarranted degree. Efforts were made to ensure the outcomes of the study benefited all research participants regardless of the individual's demographics.

Once the Institutional Review Board approval was received, potential participants were recruited and screened. Eligible participants received an email containing a link to the informed consent document. The purpose of obtaining informed consent was to ensure the research participants understand the rights, benefits, and potential risks (Nembaware et al., 2019). Participants were asked to review, share concerns and questions, and sign the form. An opportunity to ask questions was provided during a scheduled Zoom meeting before the scheduled interviews.

To protect the rights of the research participants, interview audio recordings and transcriptions were downloaded, encrypted, labeled to differentiate each participant, and stored on a password-protected laptop for a total of 3 years in accordance with federal regulations (45 CFR 46). The information was kept confidential by using fictitious names. Non-disclosure of the information was observed during the data collection process. At the end of 3 years, the data will be destroyed by deleting the information (Arifin, 2018). The recycle bin will be emptied to ensure the data is completely removed from the laptop. Any hand-written notes will be shredded.

Relationships with participants in qualitative research can raise ethical concerns. If familiar names appear during the recruitment process, participants were eliminated to minimize bias (Sanjari et al., 2014). Additional considerations were given to the potential risks of participants opting not to share negative information based on fear of confidentiality and

anonymity in addition to participants hearing about the study in advance threatening the study's internal validity due to biased responses. Attempts were made to clearly define the study's boundaries based on the Belmont Report to ensure full transparency.

Chapter Summary

Methodologies help researchers understand the future effects of an event providing an insight into human behaviors. Qualitative research methodology involves analyzing data to develop an in-depth insight into a problem and interpret human behavior (Aspers & Corte, 2019). A descriptive design is a qualitative methodology that seeks to understand the phenomena and the human experiences of an event (Tenny et al., 2020). The descriptive design for this study is significant for promoting research focused on the lived experiences of community college students and the perceptions of the online learning environment.

The role of the researcher is to safeguard the participants and the data collected throughout the research process. Ethical issues are apparent at all stages of research (Nembaware et al., 2019). Informal relationships in qualitative research might become a possible conflict. An explanation of the study's research procedures including a definition of the population, description, and justification for the sampling strategy, informed consent, and site permission procedures will help to reduce the risks of breaching ethical procedures. To protect the rights of the research participants ethical procedures outlined in the Belmont Report and Institutional Review Board were closely followed to ensure the safety of all participants during recruitment, screening, data collection, and data analysis. The research findings and the data analysis results will be described in detail in Chapter 4.

Chapter 4: Research Findings and Data Analysis Results

COVID-19 impacted the United States in March of 2020 during the higher education spring semester. As a result of a worldwide pandemic, education experienced an immediate transition to remote learning (Adnan & Anwar, 2020). Professors and adult learners who had limited knowledge of online education were challenged by how to use instructional-based digital technology effectively to facilitate learning in an online environment. The descriptive study explored the perceptions of higher education adult learners and the perceptions of online learning at a large urban community college on Long Island in New York.

Statement of the Problem

The problem is more than one-third of college students feel disengaged and demotivated when learning online during extreme or unforeseen circumstances, resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). A limited amount of distance education support is available at higher education institutions to properly train faculty on how to align curriculum with digital technology so as to effectively engage students and facilitate learning in online environments in the United States. Higher education adult learners' perception of online education, as a result, has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). A better understanding of students' perceptions is necessary to improve online learning outcomes.

The pandemic forced teachers and students to adapt to instructional-based digital technology suddenly. Online learning requires a certain level of pedagogical content knowledge to design and organize an effective learning environment (Rapanta et al., 2020). COVID-19 has offered significant opportunities to evaluate effective online pedagogy methods to facilitate learning (Crawford et al., 2020). This proposed study is necessary to fill the gap between online

learning experiences and the effective use of instructional-based digital technology to align curriculum at higher education institutions in the United States.

Purpose of the Study

The purpose of the qualitative descriptive study was to explore students' perceptions and feelings about experiences of motivation, engagement, and learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York. This study was necessary to create greater awareness and appreciation for online learning and instructional-based digital teaching methods. Digital literacy is an essential 21st-century skill that must be taught to students to exist in a global economy (Divya & Haneefa, 2018). Information for this study will add to the research on effective instructional-based digital teaching methods for online learning.

The research explored how the effective use of instructional-based digital teaching strategies can influence student motivation and engagement. The sample size generated from the target population of 10, 500 community college students enrolled in 20 fields of study will be 20 with a minimum of 15 participants. The selected instrument for the study was an in-depth interview. The purpose of semi-structured interviews was to explore online learning experiences for community college students (Schnittker, et al., 2018). The interviews were semi-structured with six open-ended questions to guide the collection of community college students' perceptions of online learning.

Constructivism learning theory and the behaviorism learning theory were the theoretical frameworks used to explain how the influence of social and environmental interactions affects student online motivation. Interactive class discussions between the students and the instructor can have a positive impact on student motivation resulting in improved learning outcomes

(Picciano, 2017). Constructivism learning theory and the behaviorism learning theory were applied to explain the benefits of online interactions to improve students learning outcomes (Ghazi-Saidi et al., 2020). The interview questions were created to align with one or more of the three research questions. The following questions supported the study:

Research Question 1: How do students at a large suburban community college on Long Island in New York feel about the online learning experience under extreme or unforeseen circumstances?

Research Question 2: How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?

Research Question 3: What are the perceptions of students at a large suburban community college on Long Island in New York about online engagement when studying under extreme or unforeseen circumstances?

As a result of the study, educational institutions will be able to develop an understanding of how to use instructional-based digital teaching methods to effectively engage and motivate students to enhance the learning environment. Using instructional-based digital technology requires an awareness of how the technology will interact with students to improve learning outcomes (Derboven et al., 2017). The following sections will be addressed in this chapter; data collection, data analysis and results, reliability and validity, and chapter summary.

Data Collection

The data collection process began after obtaining Institutional Review Board approval from the American College of Education (see Appendix B) followed by the community college (see Appendix C) where the research was conducted. Emails were sent to approximately 45

professors throughout the campus with the participant invitation letter attached (see Appendix I). The professors were asked to distribute the letter to students who could serve as potential participants in the study. Participants who expressed interest in participating in the study received screening information via email which outlined participation criteria as indicated in the informed consent (see Appendix E). Demographics were collected using Google Forms to screen potential participants (see Appendix D). Students were sampled to ensure the selected individuals were representative of the total population (Gentles & Vilches, 2017).

The recruitment process started at the end of the fall 2021 semester before the winter break. As a result, the time frame for response to the informed consent form and data collection may have taken longer compared to other times during the semester. Four participants were recruited and interviewed between November 30, 2021, and January 10, 2022. Changes were made to the participant criteria and the length of the interview time as a result and approved by the Institutional Review Board on January 14, 2022 (see Appendix J). The participant criteria were changed from NCC students enrolled in courses between the fall of 2019 and during the spring 2020 semester to NCC students enrolled in courses between the spring 2020 semester and fall of 2021. The change provided an opportunity to recruit the minimum number of participants (15) required by ACE. The duration of the interview was changed from 90 minutes to 75 minutes. The rationale behind the time change was also related to participant recruitment.

Once the screening process was completed, participants received the informed consent form via email and were asked to review, accept it by signature, and return it via email (Nembaware et al., 2019). An opportunity was provided for all participants to schedule a Zoom meeting to address any questions related to the study and the informed consent form before the scheduled interview. Participants returned the signed form via email anywhere between 1 to 2

weeks after receiving the consent. Upon receipt of the form, participants were contacted via email to schedule the interview which occurred within a 1-week time frame.

The interviews were conducted using Zoom at the participants' convenience in 75-minute blocks of time. Data was collected by using Zoom's audio recording and transcription features and saved on the researcher's password-protected laptop. Before the recorded portion of the interview, participants were given the opportunity to ask questions.

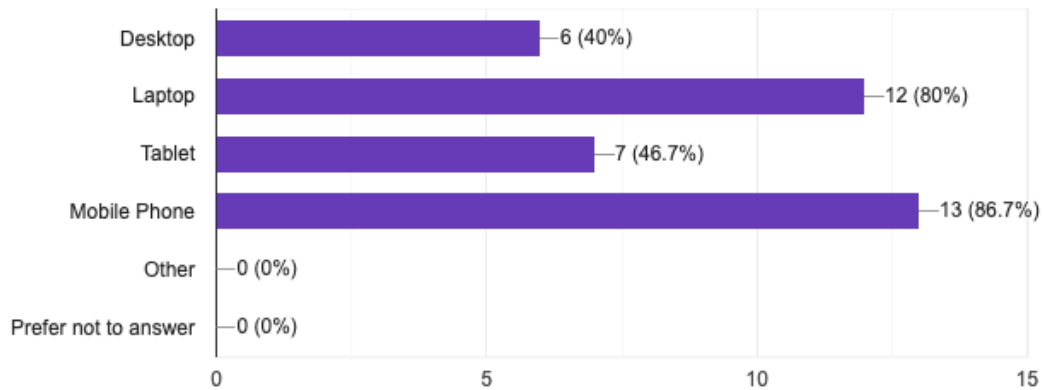
Introductions, a description of the purpose of the study, and a review of the informed consent were conducted prior to starting the audio recording. Each section of the informed consent was reviewed to ensure the participant had a full understanding of the purpose of the research, interview procedures, risks, benefits, and confidentiality (Nembaware et al., 2019). Confidentiality was protected during the recorded portion of the interview by asking participants to turn the computer camera off before starting the recording feature on Zoom. Participants were also reminded of the right to refuse or withdraw.

Demographic information was collected before the recorded portion of the interview. A link to a Google Form was copied and pasted using the chat feature in Zoom (Gentles & Vilches). Participants were informed of the option of prefer not to answer, which was the last option for all 12 multiple-choice/response demographic questions. Figure 1 represents the types of electronic devices the participants had access to.

Figure 1*Electronic Device Access*

What type of electronic devices do you have access to? (Select all that apply)

15 responses



A number was assigned to each participant (participant #1-15) to protect the identity and confidentiality of each participant (U.S. Department of Health & Human Services [HHS], 2018). Participants were informed before clicking the recording button on Zoom and were asked to verbally acknowledge by responding yes or no. Once the recording was initiated the six interview questions (see Appendix F) to support the research questions were presented.

At the end of the interview, participants were given the opportunity to share additional information about their lived experience and perceptions of online learning. Upon completion of the interview, the recording was stopped. Gratitude was expressed by each participant for being selected to share experiences and perceptions related to online learning. Before ending the Zoom session, participants were instructed to keep a copy of the informed consent form with the study's contact information and to reach out with any questions regarding the study. A thank you email was sent to each participant expressing gratitude for taking the time to participate

(Morrison et al., 2012). An additional email notifying the participants the research has ended served as the study's exit strategy.

To ensure credibility member checking was employed and participants received a copy of the transcript to ensure data accuracy approximately 1 week after the final interview. Twelve out of the 15 participants responded. Five of the 12 participants who responded provided clarity on a few of the responses made during the interview. Participants will receive an email about the results of the study once the data is analyzed and the information is permitted to be released.

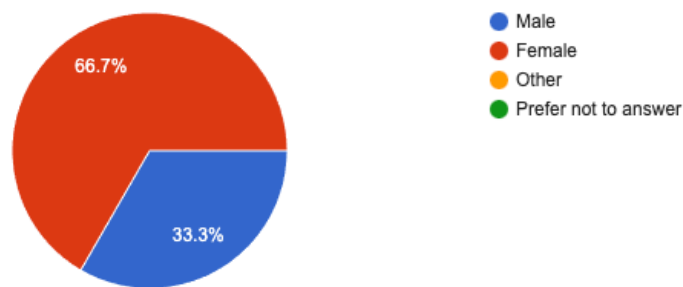
Data Analysis

Data collection ended on January 24, 2022, which provided the opportunity to begin data analysis. The analysis model was thematic analysis (TA). TA is a preferred approach for examining complex and ambiguous personal lived experiences and extracting meaning from the data (Rugwiji, 2020). Each Zoom audio interview was transcribed into a Microsoft Word document. Most of the participants who acknowledged the informed consent were female (Figure 2). Step 1 for TA was to read the interview transcripts multiple times to achieve familiarization with the raw data. Step 2 involved recording document memos to describe the context of the interviews. Keeping memo records was helpful when reporting the research findings (Kuckartz & Rädiker, 2019).

Figure 2*Participant Gender*

What gender do you identify as?

15 responses

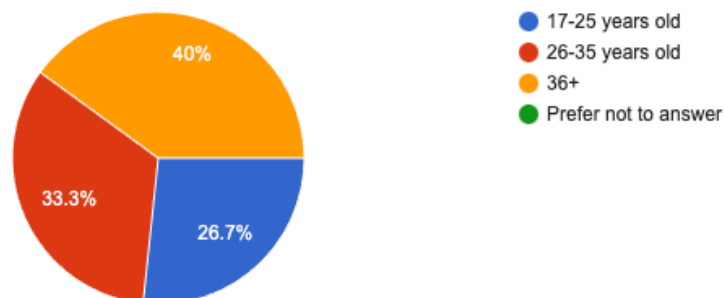


Each transcript was proofread before being imported to MAX Qualitative Data Analysis (MAXQDA) for data analysis. The transcripts were sent to each participant via email to complete member checking. Participants were asked to verify the transcript to ensure data accuracy and confirm by responding to the email. The age range of the participants was between 26 and 35 years old (Figure 3).

Figure 3*Participant Age Range*

What is your age?

15 responses



Revisions were made to the transcripts based on participant feedback and saved on a password-protected computer. MAXQDA is a software for data analysis supporting several file

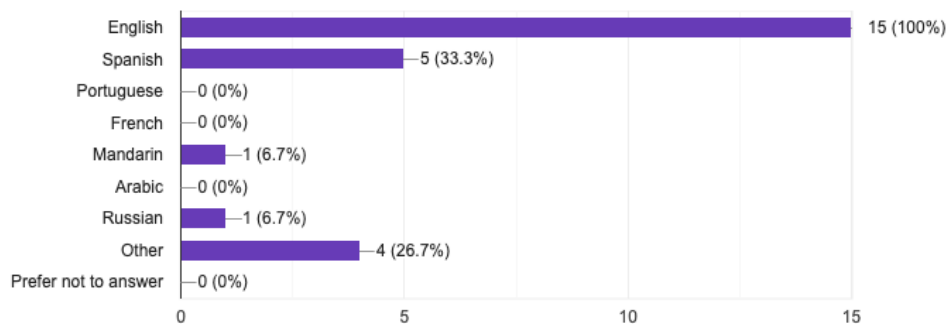
formats including text and audio (Kuckartz & Rädiker, 2019). The software was used to compare single-person transcripts to interpret the TA data. Single-person transcripts were imported to MAXQDA, and the software's coding system was used to label and index transcript content. All the participants spoke and understood English fluently (Figure 4).

Figure 4

Participant Languages

Which languages are you capable of speaking fluently? (Select all that apply)

15 responses

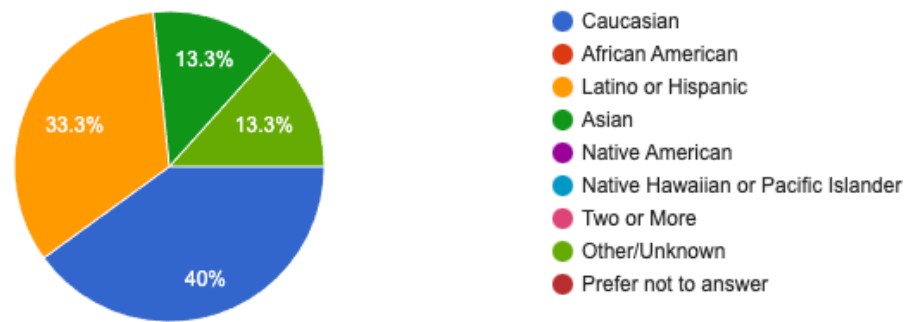


Step 3 of the TA process involved deconstructing the data and coding for understanding which was an essential part of the data analysis process. Synthesizing the data linked ideas to find how statements were related to one another to make connections as themes emerged. The transcripts showed similar experiences between the participants. The participant ethnicity was primarily Caucasian, Latino, and Asian (Figure 5). Searching for connections was Step Four of the process to identify emerging themes.

Figure 5*Participant Ethnicity*

Please specify your ethnicity

15 responses



Emerging themes were categorized during Step Four of the TA process to avoid redundancy to answer the research questions (Gizzi & Rädiker, 2021). During step five final themes were reviewed and refined based on the study's theoretical framework and research questions. Reviewing the coded data set provided clarity to ensure the final themes aligned with the codes. The three research questions were the primary focus of the data analysis process and ensured each participants' transcript was given equity. The process provided an insight into students' perceptions of the following research questions:

Research Question 1: How do students at a large suburban community college on Long Island in New York feel about the online learning experience under extreme or unforeseen circumstances?

Research Question 2: How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?

Research Question 3: What are the perceptions of students at a large suburban community college on Long Island in New York about online engagement when studying under extreme or unforeseen circumstances?

Thematic analysis (TA) was an effective approach for reviewing the themes related to the lived experiences and meaning of COVID-19 for higher education adult learners at a large urban community college on Long Island in New York. The identified themes were applied to the theoretical framework to support the purpose of the qualitative descriptive study. Constructivism learning theory (Bada & Olusegun, 2015) and the behaviorism learning theory (Weegar & Pacis, 2012) were used to explore the experiences. Table 1 represents the emerging codes and themes revealed from the data analysis process.

Table 1

Emerged Themes

Emerging Codes	Themes	Final Themes	Relevant Quotes
Noise Microphone Family	Online Experience Zoom Mask	Distractions	<p>“I could not see the professors face with the mask.”</p> <p>“It was always a struggle to make sure everyone’s microphone was off.”</p> <p>“One of the challenges, I would say is I don’t live by myself. I live with my family, so somethings there was a little background noise.”</p>
Labs Mask Textbook	Hands on Component Comprehension	Understanding	<p>“Adjusting to the new learning was hard because of the</p>

Emerging Codes	Themes	Final Themes	Relevant Quotes
			environment around me was distracting.”
			“I prefer online lessons because I’m not a native speaker.”
			“When I listen to the professor’s lecture on campus, I don’t understand it too well without the headset.”
Traffic Kids Space	Better Opportunities Time	Convenience	“I didn’t have to commute to campus, pay for gas, and find a parking spot.”
			“I liked I could just do the work anytime throughout the day.”
			“Convenience as a parent.”
Home Comfortable	More in Control Access to Resources	Safe Environment	“I like the fact that I am home.”
			“I get a little shy when I am in person, so for me I liked typing in the chat.”
			“I felt more in control of my workload.”
Zoom Email Chat	Response Time Human Interaction	Support	“The professor offered extra help sessions on the weekends.”
			“I felt a lot of support in all of my classes.”

Emerging Codes	Themes	Final Themes	Relevant Quotes
			“I felt confident and encouraged to keep going because I always received the right feedback.”

The codes and themes that emerged through the analysis process support the topics from the literature review including students’ perception of online learning, students’ online performance, and digital literacy. The analysis of the interview transcripts through MAXQDA revealed a list of codes and responses shared by the participants (Kuckartz & Rädiker, 2019). Significant themes were identified based on the emerging codes. Distraction, understanding, convenience, safe environment, and support were identified during the analysis process. Table 3 presents relevant quotes from the data analysis to support the emerging codes and themes.

Results

The following research questions addressed the students’ perceptions of online learning. Data collection occurred in three succinct phases including a pre-screening email, demographic questionnaire, and an in-depth interview with all 15 participants. The participants were primarily English-speaking females. Appendix K represents how the interview questions aligned with the research questions.

Finding Related to Research Question 1

Research Question 1 asked, “How do students at a large suburban community college on Long Island in New York feel about the online learning experience under extreme or unforeseen circumstances?” Question 1 is closely aligned with the themes of convenience and distraction.

All participants agreed online learning is convenient because more time is available to complete coursework at home or during a break at work (F. A. Rad, et al., 2021). Participant #10's comment captured the sentiment precisely. "I didn't have to commute to campus, pay for gas, and find a parking spot." Online learning provides an opportunity to engage with the course content from home while tending to family obligations such as a sick child who is unable to attend school. There is also more space available to engage with course resources such as the textbook and other printed material.

Distraction emerged as a theme based on the interview question "What were some negative or challenges you experienced with online learning?" The participants agreed the biggest challenges occurred during the spring 2020 semester due to the immediate transfer to remote learning during the pandemic and how unfamiliar students and faculty were with technology (Dhawan, 2020). Students and faculty were faced with the challenges of learning new technology including Zoom. Noise resulting from unmuted microphones caused many distractions for students especially if English was not the native language. Family distractions also existed due to the lockdown and limited home space.

Findings Related to Research Question 2

Research Question 2 asked, "How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?" Question 2 is closely aligned with the themes support and safe environment. Participant #13's comment captured the reason why most succinctly. "I felt confident and encouraged to keep going because I always received the right feedback."

The professor's response time was a key component of the online learning environment for the participants (Shahzad et al., 2020). The mode of contact was typically email. Many of the

participants stated professors generally responded within a 24-hour period to questions related to the course. Participant #9 indicated, “They were always there to answer emails.”

Findings Related to Research Question 3

Research Question 3 asked, “What are the perceptions of students at a large suburban community college on Long Island in New York about online engagement when studying under extreme or unforeseen circumstances?” Question 3 is closely aligned with the themes support and understanding. Participant #3 noted, “The professor offered extra help sessions on the weekends.” English language learners indicated the mask required for face-to-face on-campus courses made it difficult to understand the professor (Ramírez-Hurtado et al., 2021). Participant #11 capture the sentiment most succinctly. “I could not see the professor's face with the mask.” Table 2 presents the themes from the data analysis and the alignment with the three research questions.

Table 2

Research Questions & Theme Alignment

Research Question 1	Research Question 2	Research Question 3
Convenience	Support	Support
Distraction	Safe Environment	Understanding

Reliability and Validity

Qualitative research attempts to interpret the meaning of the lived experience or phenomena. Reliability and validity are key aspects of all research especially in qualitative research due to how the data is interpreted (Spiers et al., 2018). The purpose of research is to arrive at a valid conclusion without bias or opinion. Reliability refers to the repeatability or the consistency of the research findings. Validity refers to how trustworthy or credible the research data is in representing the phenomenon.

Dependability and Credibility

To ensure dependability research procedures and findings were overt and properly recorded (Sanjari et al., 2014). Code-recode procedures were implemented to ensure the dependability of the data using MAXQDA software. After the data was coded and 2 weeks had passed the data was recoded and evaluated for consistency. Audit trail was employed to transparently describe the research steps throughout the process. Member checking was employed as a strategy to ensure credibility. Each participant received a copy of the interview transcript via email to ensure the accuracy of the data collected.

Transferability

Details were provided regarding the research context including any assumptions made throughout the research process to ensure the study's results were transferable. Generalizability was applied to ensure the research's findings could be applied to other events or populations by focusing on the analysis and understanding of events (Munthe-Kaas et al., 2019). Thick description strategies were employed to ensure the study's results were transferable by having participants describe the context of the experience to provide meaning for outsiders.

Trustworthiness

The time spent with each participant during the interview process was to develop an understanding of the perceptions of online learning (Ezzat Khamis Amin et al., 2020). To enhance the trustworthiness of the study sampling biases were acknowledged to ensure the data collection and analysis were relevant to the study. Measures were also taken to account for personal biases.

Data Saturation

Data saturation was evident based on the similarities of the responses throughout the interviews. Thematic analysis revealed no additional meaning was extracted following further review of the transcripts (Saunders et al., 2018). Data saturation was achieved after the twelfth participant interview transcript when no new codes emerged. The remaining interview transcripts confirmed the emerging codes. Emerging themes based on the participants' responses supported the research questions.

Chapter Summary

The descriptive study explored students' perceptions of online learning. The in-depth interviews provided insight from the students' perspectives on the experiences of online learning (Schnittker, et al., 2018). Scheduled interviews using Zoom is how the data was collected for the study. Each participant responded to six open-ended questions related to the research questions. The data was analyzed using MAXQDA to complete the coding process and to identify themes based on the participants' responses to the six open-ended questions. The 15 participants cited convenience as the primary reason for completing online courses.

Research Question 1 was confirmed based on the convenience participant expressed about online learning. Participants confirmed the opportunity to attend class from a remote location saved time making life commitments easier to deal with. The professor's response time to questions related to the course was a positive experience for the participants in support of Research Question 2. The ability to interact with the professor on Zoom without a mask was largely confirmed by the participants (Casey, 2020). The interaction enhanced online performance and engagement in support of Research Question 3.

A summary of the research findings and conclusions concludes the next chapter. Key points of the study's findings will be restated. A summary of the implications of the research will be provided. Recommendations for future research will be suggested.

Chapter 5: Discussion and Conclusion

The purpose of the qualitative descriptive study was to explore students' perceptions about experiences of motivation, engagement, and learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York. The study's findings confirmed remote learning was more convenient. The interaction between the course instructor and the students along with the use of instructional-based digital technology enhanced online performance, motivation, and engagement. Research Question 1 was supported based on the convenience participant expressed about online learning. The opportunity to attend class from a remote location saved time making life commitments easier. In support of Research Question 2, the online course professor's response time to questions related to the course was a positive experience for the students. The ability to interact with the professor on Zoom without a mask made it easier to understand what was being discussed. Research Question 3 was supported through the interactions between the course instructor and the students. The interactions enhanced student online performance and engagement.

The research explored how the effective use of instructional-based digital teaching strategies can influence student motivation and engagement. As a result of the study, educational institutions will be able to understand how to use instructional-based digital teaching methods to effectively engage and motivate students to enhance the learning environment. Using instructional-based digital technology requires an awareness of how the technology will interact with students to improve learning outcomes.

The following sections will be addressed including the findings, interpretations, and conclusions by comparing the results of the study with the peer-review literature from Chapter 2.

The findings will be analyzed and interpreted in the context of the study's theoretical framework. Limitations of the study will be described with particular attention to transferability, credibility, internal validity, dependability, reliability, and confirmability. Recommendations will be discussed from a global perspective along with suggested changes to enhance policies and practices supported by the results for practitioners, policymakers, and researchers. The final sections will address any implications for leadership, and the conclusion focuses on the most important aspects of the study.

Findings, Interpretations, Conclusions

As a result of the literature review in Chapter 2 regarding constructivism and behaviorism learning theories students' perception of online learning, students' online performance, and digital literacy was explored. A limited amount of distance education support is available at higher education institutions to properly train faculty on how to align curriculum with digital technology so as to effectively engage students and facilitate learning in online environments in the United States. The study explored students' perception of online learning and the use of technology to motivate and engage students to learn. The findings confirmed what is known in the peer-reviewed literature discussed in Chapter 2 about online learning and the use of digital technology to motivate and engage students to enhance the learning environment. As discussed in Chapter 4, five final themes emerged during the data analysis process including distraction, understanding, convenience, safe environment, and support. The final themes were organized according to the research questions. The following paragraphs discuss the finding related to each research question.

The first research question is closely aligned with the themes of convenience and distraction. Online learning is convenient because more time is available to complete coursework

at home or during a break at work (Rad et al., 2021). Online learning provides an opportunity to engage with the course content from home while tending to family obligations such as a sick child who is unable to attend school. There is also more space available to engage with course resources such as the textbook and other printed material.

Research Question 2 is closely aligned with the themes of support and a safe environment. The professor's response time was a key component of the online learning environment for the participants (Shahzad et al., 2020). The mode of contact was typically email. Many of the students stated professors generally responded within 24 hours to questions related to the course.

The final research question is closely aligned with the themes of support and understanding. Many of the professors offered virtual extra help sessions. English language learners found it was easier to understand the professor virtually without the mask. The students appreciated the quick response time to emails from the course professors. The response time was typically within 24 hours even over the weekend.

The constructivism learning theory paired with the behaviorism learning theory guided the study. The findings of the study revealed the significance of digital technology to motivate and engage students. Based on the behaviorism learning theory, teachers can directly influence student behavior based on environmental interactions (Presti et al., 2020). Attending class from a remote location saved time providing an opportunity to complete other daily tasks. The online course professor's response time to questions related to the course content via email was a positive experience for the students.

Based on the constructivism learning theory, learning is a social activity, and the interactions with others influence a students' thought process (Mohammed & Kinyo, 2020). The

ability to interact with the professor on Zoom without a mask was largely confirmed by the students especially English language learners (Casey, 2020). The mask created a distraction making it difficult to understand what the professor was saying. The online interaction between the course instructor and students enhanced online performance and engagement.

The study's themes demonstrated the perception of online learning is driven by student motivation, engagement, and interactions with the course instructor. The behaviorism learning theory states learners establish adeptness through feedback and reinforcement (Mödrischer et al., 2006). According to Kusumawati (2020), continuous interactions between the course instructor and the students will result in better learning outcomes. The support and feedback students received during extra help sessions and email responses provided a better understanding of course content improving learning outcomes. Technology can be used to provide immediate feedback in real-time to improve a students' perception of online learning significantly influencing satisfaction levels (Rad et al., 2021). Technology paired with instructional strategies supports learning by providing a better understanding of course content. The support influenced student behavior and increased the motivation to engage with course content (Shahzad et al., 2020). Faculty support through live Zoom sessions improved learning outcomes and perceptions of online learning (Casey, 2020).

Online learning made it possible for students to learn from a remote location. The convenience and flexibility of online learning allowed students to work and tend to family matters while completing coursework during a time that was convenient (Rad, et al., 2021). Online learning during the pandemic provided an opportunity for students to avoid crowds creating a safe environment. Providing students with the opportunity to work independently while the course instructor serves as the facilitator using technology relates to the learning theory

of behaviorism. Remote learning was possible due to the availability of digital-based instructional technology (Ghazi-Saidi et al., 2020). The alignment of technology with instructional-based teaching strategies enhances students' perceptions creating a positive online learning experience. Technology provides access to learning without limitations (Isik, 2018).

Limitations

Limitations to the study included issues with the timing of the study. Many of the students enrolled during the spring 2020 semester were no longer enrolled at the community college during the fall 2021 semester when the recruitment process was initiated. As a result, changes were made to the recruitment criteria. Initially, the criteria were based on the immediate transfer to remote learning during the spring 2020 semester due to the pandemic. The pandemic continued to impact education well beyond the time making it possible to extend the recruitment criteria to the end of the fall 2021 semester. The changes in the recruitment criteria did not have an impact on the results of the study. A total of 4 out of 15 participants were recruited prior to the change. All 15 participants had similar responses to the interview questions regardless of the recruitment criteria.

A second limitation involved the sample size. The number of college students throughout the United States was higher than 15 resulting in an inadequate representation of the population (Munthe-Kaas et al., 2019). In qualitative research, the sample size is rarely representative of the total population (Queirós et al., 2017). Sampling would require random samples from a larger population to represent the total population of college students throughout the United States. The sample size for the research was based on the number of participants who met the criteria described in Chapter 3 and were available at the time the study was conducted.

Transparent steps were used to reduce limitations by aligning the research questions, data analysis, and the study's findings. To ensure dependability, research procedures and findings were overt and properly recorded (Sanjari et al., 2014). An audit trail was employed to describe the research steps throughout the process. Transferability was achieved using thick description by having participants describe the context of the experience (Munthe-Kaas et al., 2019). The extent to which the findings can be applied to other settings with other populations is based on whether the findings are applicable. If the same study was conducted using 15 other participants different results might emerge, limiting the generalizability of the study's findings.

Member checking was employed as a strategy to ensure credibility. Each participant received a copy of the interview transcript via email to ensure the accuracy of the data collected. The accuracy of the transcripts was confirmed with no objections supporting the credibility and confirmability of the data analysis.

Recommendations

Effective course design plays a significant role in enhancing the learning environment for students. Higher education learning management systems typically have digital tools to enhance online communication between the course instructor and the students. Instructors are encouraged to use the communication tools to engage and interact with students to improve learning outcomes (Roache et al., 2020). Continuous interactions between the course instructor and the students will result in better learning outcomes (Kusumawati, 2020). Stakeholders should develop a better understanding of the influences impacting student online satisfaction (Ho et al., 2021).

Computer-based learning creates an engaging student-centered environment (Coymak, 2019). Learning management systems (LMS) have been considered a robust platform to promote

student learning (Wekerle et al., 2020). Digital technology should be included to improve students' perception of online learning (Bennett et al., 2018). Students are more encouraged to interact with course content when information is paired with instructional technologies. Students' perceptions of online learning should be monitored regularly by examining instructional methods and learning outcomes (Khalil et al., 2020). Higher education institutions should provide the resources necessary to conduct quality distance education courses (Ince et al., 2020). Suggested resources should include professional development opportunities focusing on evidence-based instructional digital technologies to enhance the learning environment.

Recommendations are to have a comprehensive plan for the implementation of online learning to ensure a positive student attitude. Higher education leaders should develop policies and guidelines focusing on the effective use of digital-based pedagogical methods to improve the learning environment for all students (Roache et al., 2020). Appropriate online digital-based teaching methods are required to enhance students' cognitive and creative skills (Andriivna et al., 2020). The pandemic provided an opportunity for teachers to evaluate how digital technology can support instructor-to-student interaction to facilitate learning (O'Regan, 2020). Online learning requires the implementation of evidence-based teaching strategies, online teaching experience, and the skill level required to use the institution's learning management system (Smith & Kaya, 2021). To ensure students are receiving high-quality instructions to support learning and improve academic success stakeholders should address the limitations by providing professional development opportunities focusing on technology.

Implication for Leadership

Virtual teaching and learning are emerging methods for educational institutions around the world (Shahzad et al., 2020). Electronic devices and social media have created opportunities

for students to communicate with course instructors and peers at any time and from any location thanks to computer programs, applications, and high-speed broadband. Higher education leaders need to develop an understanding of how the effective use of technology impacts student behavior. All stakeholders must be properly trained to ensure the effective use of the tools for teaching and learning (Shahzad et al., 2020).

One of the benefits of the pandemic was exposing the need for skilled leadership to close the digital divide (Roache et al., 2020). Online access to digital material and support were two of the primary reasons why students struggled with remote learning (Johnson et al., 2020). Higher education leaders need to provide the required resources for learning motivating students to focus on personal and academic growth without the concern of feeling isolated (Bouchey et al., 2021).

Digital literacy is an important part of the 21st century. The government, school districts, and communities must bridge the digital divide gap to improve literacy. High-quality and equitable digital literacy support will improve student engagement, learning, well-being, and perception of remote learning (Bouchey et al., 2021). Communities with limited access to technology need to find ways for all students and faculty to gain access. Leaders need to focus on methods for ensuring all students receive the proper digital literacy education necessary to succeed in a technology-driven global economy.

The pandemic forced education leaders to reevaluate alternative methods for teaching and the need to modernize teaching strategies by including blended learning and digital-based technology. Blended learning has become a preferred distance education model for educators and students (Alqahtani & Rajkhan, 2020). Although institutions may have had access to a learning management system with tools suitable for blended learning many teachers were unfamiliar with

the technology Ghounane, 2020). Combining social media platforms and learning management systems may increase student motivation resulting in improved learning outcomes.

Conclusion

The study's findings confirmed remote learning was more convenient. The interaction between the course instructor and the students along with the use of instructional-based digital technology-enhanced online performance, motivation, and engagement. Instructional-based digital technology should be used as a method to motivate and engage students. Students' perception of online learning is enhanced through the collaborative interactions with the course instructor and effective course design. Digital literacy is an important 21st-century skill teaching students how to be responsible by developing an understanding of the limitations and precautions technology might require. Digital skills incorporate a wide range of abilities including digital devices, communication applications, and networks to access and manage information. To become digitally literate, an understanding of how to navigate and find information online is essential (Udoewa et al., 2016).

Online learning is a convenient way for students to learn from home reducing the time and expense of commuting. Online learning is not a new concept. More than 6 million students were enrolled in at least one online course in the United States before the pandemic (Palvia et al., 2018). The pandemic has led higher education institutions to reevaluate the support services necessary to improve student perception (Ramírez-Hurtado et al., 2021). Effective online course design requires three types of presence including social, cognitive, and facilitatory to improve student perception (Rapanta et al., 2020). During the 2020 semester, the online learning shift caused a great deal of stress for students because of the overwhelming responsibilities leading to a negative perception of online learning (Dhawan, 2020). The perception of online learning can

be improved by the inclusion of digital technology to improve online presence (Bennett et al., 2018). Students' perception of online learning is influenced by social and environmental interactions motivating and engaging students to learn, which supports the constructivism learning theory and the behaviorism learning theory.

The alignment of technology with instructional-based teaching strategies creates an authentic learning experience. Aligning learning theories with course curriculum provides a better understanding of how students learn (Picciano, 2017). Authentic teaching and learning activities based on the constructivism and behaviorism learning theories provide a better understanding of how to design course content for 21st-century learners. Technology provides students with the key competencies required to succeed in the 21st century. Purposeful and meaningful learning results when technology-based instructional strategies are aligned with the principles of the constructivism and behaviorism learning theories. Educators can positively influence behavior by engaging and motivating students to learn using technology-driven strategies based on research-supported best practices (Presti et al., 2020).

As mentioned in Chapter 2, effective online course design plays a significant role to enhance the learning environment for students. Learning management systems are typically equipped with the digital tools necessary to enhance online interaction and communication between the course instructor and the students. Instructors are encouraged to use the communication tools to engage and interact with students to improve learning outcomes (Roache et al., 2020). Continuous interactions between the course instructor and the students will result in better learning outcomes (Kusumawati, 2020). The integration of technology with instructional-based teaching strategies creates an active learning environment and improves digital literacy skills for 21st-century learners. Improving digital literacy skills will build upon students'

strengths in a continued effort to facilitate growth (Kuehl, 2018). Students' learning outcomes and academic success can be positively impacted by incorporating digital technology into education.

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Appendix A

Site Permission

July 17, 2021

[REDACTED]

Associate Vice President
Institutional Effectiveness & Strategic Planning

Dear [REDACTED]:

My Name is Laurie Gorman, and I am a doctoral candidate at the American College of Education (ACE) writing to request permission to interview [REDACTED] students. This information will be used for my dissertation research related to online motivation for students in higher education. The purpose of this qualitative phenomenological study will be to explore how COVID-19 influenced community college students' perception of online learning at NCC. The study will explore the influence online learning had on student motivation during COVID-19 to find a shared meaning among the participants. I will need approximately twenty-five students to participate in a one-hour in-depth audio-recorded interview.

Important contacts for this study include:

Principal Investigator: Laurie Gorman
Email: Laurie.Gorman3766@my.ace.edu
Phone: 516-551-7001

Dissertation Chair: Dr. Junfu Gao
Email: Junfu.Gao@ace.edu

Thank you for your attention to this issue and prompt response. I appreciated your time and consideration of my request.

Regards,

Laurie Gorman

NCC Site Request Permission.docx
20 KB
✓

Hi Laurie,

Thanks for your email. Please find attached the site request template for completion. If your study has been approved by your institution's IRB office, you will need to attach the approved IRB, including the various research instruments – consent form, interview protocols, etc.

Please let me know if you have any questions.

Sincerely,



Gorman, Laurie

Fri 7/16/2021 1:44 PM

July 20, 2021

Dear Institutional Review Board,

My name is Laurie Gorman, and I am the Principal Investigator for A Phenomenological Study of Online Motivation for Community College Students a study being conducted at the department of Curriculum and Instruction at the American College of Education. As part of this research, I need to be granted permission to conduct the following specific activities at your institution:

The purpose of this qualitative phenomenological study will be to explore how COVID-19 influenced higher education students' perception of online learning at [REDACTED]. The study will explore how students' perception of online learning affects motivation and learning outcomes when faced with extreme or unforeseen circumstances. I will need approximately twenty-five students to participate in a one-hour in-depth audio-recorded interview.

My study has not been approved by the Institutional Review Board at the American College of Education yet. Please find attached the approved Institutional Review Board study and all research protocols.

If you have questions and would like to reach me, please don't hesitate to do so at laurie.gorman3766@my.ace.edu, 516-551-7001.

Sincerely,

[Signature]

Laurie Gorman
Doctoral Candidate
Laurie.gorman3766@my.ace.edu
516-551-7001

Provisional Institutional Review Board Request

Dear IRB Members,

In order to receive IRB approval from the institution I am planning to conduct my research, provisional approval is required from ACE. Please see the email exchange below in addition to the attached site permission letter and institution's site request form. I am currently working on chapter 3. Dr. Teliana McLemore is the professor for RES6521.

Thank you for your time and consideration,

Laurie Goman



Site Permission
Letter.docx



NCC Site
Request_n.docx

From: ACE IRB <IRB@ace.edu>

Date: August 17, 2021 at 9:00:41 AM EDT

To: Laurie Batchelder <laurie32@optonline.net>, ACE IRB <IRB@ace.edu>

Subject: RE: IRB Provisional Approval

Hello Laurie,

Thanks for reaching out. When you submit your proposal to IRB you will need to include this communication to show this is the required process for the site. When your study is approved, you will be issued conditional approval which will allow you to submit the ACE approved draft to the other organization.

Tiffany Hamlett, Ph. D.

Chair, Institutional Review Board

American College of Education

101 W Ohio, Suite 1200, Indianapolis, IN 46204

Phone: 817-437-1296

Email: tiffany.hamlett@ace.edu

ace.edu



Appendix B



November 15, 2021

To : Laurie Gorman
Junfu Gao, Dissertation Committee Chair

From : Institutional Review Board
American College of Education

Re: IRB Approval

"A Phenomenological Study of Online Motivation for Community College students"

The American College of Education IRB has reviewed your application, proposal, and any related materials. We have determined that your research provides sufficient protection of human subjects.

Your research is therefore approved to proceed. The expiration date for this IRB approval is one year from the date of review completion, November 15, 2022. If you would like to continue your research beyond this point, including data collection and/or analysis of private data, you must submit a renewal request to the IRB.

Candidates are prohibited from collecting data or interacting with participants if they are not actively enrolled in a dissertation sequence course (RES6521, RES6531, RES6541, RES6551, RES6561, RES6302) and under the supervision of their dissertation chair.

Our best to you as you continue your studies.

Sincerely,

Becky Gerambia
Assistant Chair, Institutional Review Board
American College of Education

Appendix C

[REDACTED]
School of Biological Sciences
[REDACTED]
[REDACTED]

Institutional Review Board

Date: November 30, 2021

To: Laurie Gorman
Principal Research Investigator
From: [REDACTED]
[REDACTED] Institutional Review Board
Subject: Site Permission

Dear Laurie,

Please be advised that [REDACTED] IRB has approved your request to include Nassau Community College as a data collection site for your proposed research project, "**A Phenomenological Study of Online Motivation for Community College students**"

This approval authorizes you to collect data from [REDACTED] as described in your approved IRB from American College of Education

Be advised that changes in the scope or subjects of your research that may occur during the project's work will require approval of [REDACTED] IRB. In addition, it is required that any intended publication of your study that advance conclusions identified with

Appendix D

Demographic Questionnaire

1. What gender do you identify as?
 - a. Male
 - b. Female
 - c. Other
 - d. Prefer not to answer
2. What is your age?
 - a. 17 – 25 years old
 - b. 26 - 35 years old
 - c. 36 +
 - d. Prefer not to answer
3. Please specify your ethnicity
 - a. Caucasian
 - b. African American
 - c. Latino or Hispanic
 - d. Asian
 - e. Native American
 - f. Native Hawaiian or Pacific Islander
 - g. Two or More
 - h. Other/Unknown
 - i. Prefer not to say

4. Where is your home located?
 - a. North America/Central America
 - b. South America
 - c. Europe
 - d. Africa
 - e. Asia
 - f. Australia
 - g. Caribbean Islands
 - h. Pacific Islands
 - i. Other: _____
 - j. Prefer not to say
5. What is the highest degree or level of education you have?
 - a. High School
 - b. Associates Degree
 - c. Bachelor's Degree
 - d. Master's Degree
 - e. Trade School
 - f. Prefer not to say
6. Are you married?
 - a. Yes
 - b. No
 - c. Prefer not to say
7. Who lives in your household? (Select all that apply)

- a. Self
- b. Spouse
- c. Children
- d. Parents
- e. Grandparents
- f. Other: _____
- g. Prefer not to say

8. What is your current employment status?

- a. Employed Full-Time
- b. Employed Part-Time
- c. Seeking opportunities
- d. Prefer not to say

9. Which languages are you capable of speaking fluently? (Select all that apply)

- a. English
- b. Spanish
- c. Portuguese
- d. French
- e. Mandarin
- f. Arabic
- g. Other: _____
- h. Prefer not to say

10. Where were you born?

- a. North America

- b. Central America
- c. South America
- d. Europe
- e. Africa
- f. Asia
- g. Australia
- h. Caribbean Islands
- i. Pacific Islands
- j. Other: _____
- k. Prefer not to say

11. What type of electronic devices do you have access to? (Select all that apply)

- a. Desktop
- b. Laptop
- c. Tablet
- d. Mobile Phone
- e. Other: _____
- f. Prefer not to say

12. Have you taken on online course?

- a. Yes
- b. No
- c. Prefer not to say

Appendix E

Informed Consent



Prospective Research Participant: Read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

Project Information

Project Title: A Phenomenological Study of Online Motivation for Community College Students

Researcher: Laurie Gorman

Organization: American College of Education

Email: Laurie.Gorman3766@my.ace.edu **Phone:** 516-551-7001

Date of IRB Approval:

Please note that this research study has been approved by the American College of Education Institutional Review Board. The IRB approved the study on _____. A copy of the approval letter will be provided upon request.

Researcher's Dissertation Chair: Dr. Junfu Gao

Organization and Position: American College of Education, Dissertation Chair

Email: Junfu.Gao@ace.edu

Introduction

I am Laurie Gorman, and I am a doctoral candidate student at American College of Education. I am doing research under the guidance and supervision of my Chair, Dr. Junfu Gao. I will give you some information about the project and invite you to be part of this research. Before you decide, you can talk to anyone you feel comfortable with about the research. If you have questions, ask me to stop as we go through the information, and I will explain. If you have questions later, feel free to ask me then.

Purpose of the Research

The purpose of this phenomenological study will be to explore how COVID-19 influenced higher education students' perception of online learning at [REDACTED]. The study will explore the influence online learning had on student motivation during COVID-19 to find a shared meaning

among the participants. You are being asked to participate in a research study which will assist with developing an understanding of how student motivation impacts online performance. Conducting this qualitative study will expand on the current research of overcoming challenges related to online learning.

Research Design and Procedures

The study will use a qualitative and phenomenological research design. In-depth interviews will be disseminated to specific participants within [REDACTED]. The study will comprise of 15 participants who will participate in an in-depth interview. The study will involve in-depth interviews to be conducted at site most convenient for participants. Participants will be selected to answer open-ended questions specific to online learning.

Participant selection

You are being invited to take part in this research because of your experience as a student who can contribute much to the online environment, which meets the criteria for this study.

Participant selection criteria: Community College students enrolled in course at the college between spring 2020 semester and fall 2021.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate. If you choose not to participate, there will be no punitive repercussions.

Right to Refuse or Withdraw

Participation is voluntary. At any time, you wish to end your participation in the research study, you may do so by sending me an email explaining you are opting out of the study. There will be no repercussions for leaving the study.

Procedures

We are inviting you to participate in this research study. If you agree, you will be asked to participate in an in-depth interview. The type of questions asked will range from a demographical perspective to direct inquiries about the topic of online learning.

Duration

The interview portion of the research study will require approximately 75 minutes to complete. If you are chosen to be a participant, the time allotted for the interview will be scheduled at a location and time convenient for the participant. Prior to an interview, you will be asked to provide permission to have the interview recorded for the sake of having accurate transcripts for data.

Risks

The researcher will ask you to share personal and confidential information, and you may feel uncomfortable talking about some of the topics. You do not have to answer any question or take part in the discussion if you don't wish to do so. You do not have to give any reason for not responding to any question.

Benefits

While there will be no direct financial benefit to you, your participation is likely to help us find out more about online learning. The potential benefits of this study will aid the college in developing effective online learning experiences for students to improve learning outcomes.

Confidentiality

I will not share information about you or anything you say to anyone outside of the researcher. During the defense of the doctoral dissertation data collected will be presented to the dissertation committee. The data collected will be kept in a locked file cabinet or encrypted computer file. Any information about you will be coded and will not have a direct correlation, which directly identifies you as the participant. Only I will know what your number is, and I will secure your information on a password protected computer.

Sharing the Results

At the end of the research study, the results will be available for each participant. It is anticipated to publish the results so other interested people may learn from the research.

Questions About the Study

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me or Dr. Junfu Gao. This research plan has been reviewed and approved by the Institutional Review Board of American College of Education. This is a committee whose role is to make sure research participants are protected from harm. If you wish to ask questions of this group, email IRB@ace.edu.

Certificate of Consent

I have read the information about this study, or it has been read to me. I acknowledge why I have been asked to be a participant in the research study. I have been provided the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I certify I am at least 18 years of age. I consent voluntarily to be a participant in this study.

Print or Type Name of Participant: _____

Signature of Participant: _____

Date: _____

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily. A copy of this Consent Form has been provided to the participant.

Print or type name of lead researcher: _____

Signature of lead researcher: _____

Date: _____

PLEASE KEEP THIS INFORMED CONSENT FORM FOR YOUR RECORDS.

Informed Consent (Revised)



Prospective Research Participant: Read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

Project Information

Project Title: A Phenomenological Study of Online Motivation for Community College Students

Researcher: Laurie Gorman

Organization: American College of Education

Email: Laurie.Gorman3766@my.ace.edu **Phone:** 516-551-7001

Date of IRB Approval:

Please note that this research study has been approved by the American College of Education Institutional Review Board. The IRB approved the study on November 30, 2021. A copy of the approval letter will be provided upon request.

Researcher's Dissertation Chair: Dr. Junfu Gao

Organization and Position: American College of Education, Dissertation Chair

Email: Junfu.Gao@ace.edu

Introduction

I am Laurie Gorman, and I am a doctoral candidate student at American College of Education. I am doing research under the guidance and supervision of my Chair, Dr. Junfu Gao. I will give you some information about the project and invite you to be part of this research. Before you decide, you can talk to anyone you feel comfortable with about the research. If you have questions, ask me to stop as we go through the information, and I will explain. If you have questions later, feel free to ask me then.

Purpose of the Research

The purpose of this phenomenological study will be to explore how COVID-19 influenced higher education students' perception of online learning at [REDACTED]. The study will explore the influence online learning had on student motivation during COVID-19 to find a shared meaning among the participants. You are being asked to participate in a research study which will assist with developing an understanding of how student motivation impacts online performance. Conducting this qualitative study will expand on the current research of overcoming challenges related to online learning.

Research Design and Procedures

The study will use a qualitative and phenomenological research design. In-depth interviews will be disseminated to specific participants within [REDACTED]. The study will comprise of 15 participants who will participate in an in-depth interview. The study will involve in-depth interviews to be conducted at site most convenient for participants. Participants will be selected to answer open-ended questions specific to online learning.

Participant selection

You are being invited to take part in this research because of your experience as a student who can contribute much to the online environment, which meets the criteria for this study.

Participant selection criteria: Community College students enrolled in course at the college between the spring 2020 semester and fall 2021.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate. If you choose not to participate, there will be no punitive repercussions.

Right to Refuse or Withdraw

Participation is voluntary. At any time, you wish to end your participation in the research study, you may do so by sending me an email explaining you are opting out of the study. There will be no repercussions for leaving the study.

Procedures

We are inviting you to participate in this research study. If you agree, you will be asked to participate in an in-depth interview. The type of questions asked will range from a demographical perspective to direct inquiries about the topic of online learning.

Duration

The interview portion of the research study will require approximately 75 minutes to complete. If you are chosen to be a participant, the time allotted for the interview will be scheduled at a location and time convenient for the participant. Prior to an interview, you will be asked to provide permission to have the interview recorded for the sake of having accurate transcripts for data.

Risks

The researcher will ask you to share personal and confidential information, and you may feel uncomfortable talking about some of the topics. You do not have to answer any question or take part in the discussion if you don't wish to do so. You do not have to give any reason for not responding to any question.

Benefits

While there will be no direct financial benefit to you, your participation is likely to help us find out more about online learning. The potential benefits of this study will aid the college in developing effective online learning experiences for students to improve learning outcomes.

Confidentiality

I will not share information about you or anything you say to anyone outside of the researcher. During the defense of the doctoral dissertation data collected will be presented to the dissertation committee. The data collected will be kept in a locked file cabinet or encrypted computer file. Any information about you will be coded and will not have a direct correlation, which directly identifies you as the participant. Only I will know what your number is, and I will secure your information on a password protected computer.

Sharing the Results

At the end of the research study, the results will be available for each participant. It is anticipated to publish the results so other interested people may learn from the research.

Questions About the Study

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me or Dr. Junfu Gao. This research plan has been reviewed and approved by the Institutional Review Board of American College of Education. This is a committee whose role is to make sure research participants are protected from harm. If you wish to ask questions of this group, email IRB@ace.edu.

Certificate of Consent

I have read the information about this study, or it has been read to me. I acknowledge why I have been asked to be a participant in the research study. I have been provided the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I certify I am at least 18 years of age. I consent voluntarily to be a participant in this study.

Print or Type Name of Participant: _____

Signature of Participant: _____

Date: _____

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily. A copy of this Consent Form has been provided to the participant.

Print or type name of lead researcher: _____

Signature of lead researcher: _____

Date: _____

PLEASE KEEP THIS INFORMED CONSENT FORM FOR YOUR RECORDS.

Appendix F

Interview Questions

1. Describe your online learning experiences prior to the pandemic. (RQ1)
2. Describe your online learning experience during the pandemic. (RQ1)
3. What were some negative or challenges you experienced with online learning? (RQ2)
4. What were some positive you experienced with online learning? (RQ2)
5. How did you feel about the academic support you received from your course professor?
(RQ3)
6. How would you describe your level of engagement with online learning? (RQ 3)

Appendix G

Interview Protocol

The purpose of this descriptive study will be to explore how COVID-19 influenced higher education students' perception of online learning at NCC. The study will explore the influence online learning had on student motivation during COVID-19 to find a shared meaning among the participants. You are being asked to participate in a research study which will assist with developing an understanding of how student motivation impacts students' perception of online learning. Conducting this qualitative study will expand on the current research of overcoming challenges related to online learning. The interview protocol includes the following:

1. Participants will receive detailed instruction regarding how the interview will be structured prior to the start of the interview.
2. The interview will begin with an introduction.
3. An opportunity for participants to ask questions will be given at the beginning and the end of the interview.
4. Participants will be asked to change the Zoom screen name to an assigned participant number (1-15).
5. Participants will be asked to turn off the computer camera prior to starting the recorded portion of the interview.
6. Time will be monitored to ensure the 75-minute interview time is not exceeded.
7. Interview questions will be asked with the goal of answering the research questions.

Follow-up questions will be asked based on the participants response to the initial interview question.

8. If necessary, prompts will be provided to enhance the participants' understanding of the open-ended interview question.
9. Once the interview process is complete, participants will receive additional information about the study.

Appendix H

Subject Matter Experts

Laurie Gorman

Wed 7/28/2021 11:02 AM

To:

SME- Interview Question...

14 KB

Hi

Thank you for agreeing to be an SME. I have attached the research interview questions and information about my study. Please review the interview questions for content validation and suggest revisions if appropriate.

Title: A Phenomenological Study of Online Motivation for Community College Students

Description: The background of the problem is the lack of experience and the effective use of instructional-based digital technology to engage students at higher education institutions in the United States. Higher education students' perception of online education has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). The problem is more than one-third of college students feel disengaged and demotivated under extreme or unforeseen circumstances when learning online resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). The purpose of the qualitative phenomenological study is to explore students' perceptions about experiencing motivation and engagement and the feelings about the learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York.

Thank you for your time!

Laurie Gorman
American College of Education
Doctoral Candidate

Tue 8/3/2021 12:13 PM

To: Laurie Gorman

SME- Interview Question...

19 KB

Please be cautious

This email originated from outside of ACE organization

are my markups displaying?

...

CONFIDENTIAL EMAIL: This e-mail is intended solely for the addressee. The information contained herein is confidential. Any dissemination, distribution or copying of this e-mail, other than by its intended recipient, is strictly prohibited. If you have received this e-mail in error, please notify me immediately and delete this message.

Received, thank you.

Looks good to me.

Thank you!

Are the suggestions above helpful?

Yes

No

Reply

Forward

Subject Matter Expert (SME)

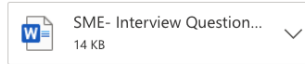
1



Laurie Gorman

Wed 7/28/2021 8:38 AM

To:



Hi [redacted],

Thank you for agreeing to be an SME. I have attached the research interview questions and information about my study. Please review the interview questions for content validation and suggest revisions if appropriate.

Title: A Phenomenological Study of Online Motivation for Community College Students

Description: The background of the problem is the lack of experience and the effective use of instructional-based digital technology to engage students at higher education institutions in the United States. Higher education students' perception of online education has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). The problem is more than one-third of college students feel disengaged and demotivated under extreme or unforeseen circumstances when learning online resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). The purpose of the qualitative phenomenological study is to explore students' perceptions about experiencing motivation and engagement and the feelings about the learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York.

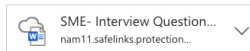
Thank you for your time!

Laurie Gorman
American College of Education
Doctoral Candidate



Tue 8/3/2021 3:31 PM

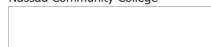
To: Laurie Gorman

**Please be cautious**

This email originated from outside of ACE organization

Best,

[redacted]
Technologist III
English Department
Nassau Community College





...

CONFIDENTIAL EMAIL: This e-mail is intended solely for the addressee. The information contained herein is confidential. Any dissemination, distribution or copying of this e-mail, other than by its intended recipient, is strictly prohibited. If you have received this e-mail in error, please notify me immediately and delete this message.

Subject Matter Expert (SME)3

You forwarded this message on Wed 7/28/2021 9:40 AM

**Laurie Gorman**
Wed 7/28/2021 9:17 AM
To: [redacted]

 SME- Interview Question...
14 KB

Hi [redacted]


Thank you for agreeing to be an SME. I have attached the research interview questions and information about my study. Please review the interview questions for content validation and suggest revisions if appropriate.

Title: A Phenomenological Study of Online Motivation for Community College Students

Description: The background of the problem is the lack of experience and the effective use of instructional-based digital technology to engage students at higher education institutions in the United States. Higher education students' perception of online education has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). The problem is more than one-third of college students feel disengaged and demotivated under extreme or unforeseen circumstances when learning online resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). The purpose of the qualitative phenomenological study is to explore students' perceptions about experiencing motivation and engagement and the feelings about the learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York.

Thank you for your time!

Laurie Gorman
American College of Education
Doctoral Candidate



[redacted]

Wed 7/28/2021 10:19 AM
To: Laurie Gorman

Please be cautious
This email originated from outside of ACE organization

Looks good to me initially.
Can we talk more during drop in today?

Also, possible typo?

with high-speed board band (Should it be broad?)


Sent from my iPhone, with all its idiosyncratic typos

On Jul 28, 2021, at 9:40 AM, Laurie Gorman <laurie.gorman3766@my.ace.edu> wrote:

...

<SME- Interview Questions.docx>


Laurie Gorman
 Wed 7/28/2021 8:30 AM
 To: [Redacted]


 SME- Interview Question...
 14 KB

Hi [Redacted]

Thank you for agreeing to be an SME. I have attached the research interview questions and information about my study. Please review the interview questions for content validation and suggest revisions if appropriate.


Title: A Phenomenological Study of Online Motivation for Community College Students

Description: The background of the problem is the lack of experience and the effective use of instructional-based digital technology to engage students at higher education institutions in the United States. Higher education students' perception of online education has been affected, which may have an impact on learning outcomes (Adnan & Anwar, 2020). The problem is more than one-third of college students feel disengaged and demotivated under extreme or unforeseen circumstances when learning online resulting in low academic performance (Al-Salman & Haider, 2021; Gonzalez-Ramirez et al., 2021). The purpose of the qualitative phenomenological study is to explore students' perceptions about experiencing motivation and engagement and the feelings about the learning outcomes when studying online under extreme or unforeseen circumstances at a large suburban community college on Long Island, New York.

Thank you for your time!

Laurie Gorman
 American College of Education
 Doctoral Candidate

[Redacted]
 Wed 8/4/2021 8:42 AM
 To: Gorman, Laurie


 L GormanInterview Ques...
 21 KB

GM Laurie,

Please see attached with my comments. My thoughts are that you need to zero in on what you are looking to research. You have a lot of different ideas here but each of them can be a topic for research:

- student perceptions of online learning before and after the pandemic;
- student motivation in online learning ...
- student engagement in online learning...
- student and professor readiness for online learning..

I think you can further develop and explore just the questions on perception of online learning especially considering the pandemic but that is up to your advisor whether that is ok. I think this type of info would be so invaluable as we lessons learned from the pandemic.

Let me know if this is helpful and if you would like to chat more. I find this interesting. Best of luck!



[Redacted]
 Assistant Vice President, Distance Education
 Nassau Community College

Appendix I

Invitation to Participate



July 17, 2021

Dear Student

I am a doctoral student at American College of Education. I am writing to let you know about an opportunity to participate in a dissertation research study.

Brief description of the study:

The purpose of this phenomenological study will be to explore how COVID-19 influenced higher education students' perception of online learning at [REDACTED]. The study will explore the influence online learning had on student motivation during COVID-19 to find a shared meaning among the participants.

Description of criteria for participation:

Your participation in the study will be voluntary. If you wish to withdraw from the research at any time, you may do so by contacting me using the information below.

I may publish the results of this study; however, I will not use your name nor share identifiable data you provided. Your information will remain confidential. If you would like additional information about the study, please contact the following

Candidate Contact Information:

Laurie Gorman

Email: Laurie.Gorman3766@my.ace.edu

Phone: 516-551-7001

Chair Contact Information:

Dr. Junfu Gao

Junfu.Gao@ace.edu

If you meet the criteria above, are interested in participating in the study, and would like to be included in the potential participant pool, please use the link below to access, review, and accept the informed consent.

Link to approved IRB Informed Consent

Thank you again for considering this dissertation research opportunity.

Appendix J

IRB Change Matrix for Second Approval

During the data collection process, and even during dissertation final review, it is not uncommon to have changes made to the dissertation. Updating an **IRB approved** study may require a re-evaluation by the IRB. Anytime there is a needed change, please **check with your dissertation chair before moving forward** with updates.

The chart below addresses common issues that may require another IRB approval. This list is not exhaustive but includes the common reasons for a new approval. Please complete this form and email it (copying your dissertation chair) and your revised dissertation draft (all chapters, with embedded comments/track changes) to: IRB@ACE.edu

Note: IRB changes requiring a second approval are not submitted using Forms Central at this time. They are instead submitted by email.

Candidate Name: Laurie Gorman

Dissertation Chair: Dr. Gao

Chapter TOR (if enrolled in a chapter course): Dr. Ball – Chapter 4

Person referring candidate for another IRB approval: Dr. Ball & Dr.

Gao

Dissertation Title: A Phenomenological Study of Online Motivation for Community

College Students

Date of last IRB approval: 11/15/21

Change Matrix describing areas to be reviewed by IRB

Topic	Subtopic	Description of Change from <u>IRB</u> <u>approved</u> proposal Candidate: to complete this column, include the chapter/page(s) with your description of the change
Population	Change in target population, subgroups, and/or location	No Change
	Increase or decrease in # of participants	No Change
	Change in recruitment procedures	The participation inclusion criteria will include students enrolled in courses at the community college between spring 2020 and fall 2021.
Instrumentation	Change in type, version, and/or format	The interview portion of the research study will require approximately 75 minutes to complete.

Data Collection	Change in data collection procedures	No Change
Data Analysis	Change in statistical test	No Change
Supporting Documents	Any changes to consent forms, instruments, or recruitment letters	If approved the changes above will be made to the informed consent and the recruitment letter.
Other Specify:	Specify:	No Change



ACE IRB

Fri 1/14/2022 1:40 PM

To: Laurie Gorman; ACE IRB

Cc: Junfu Gao <junfu.gao@ace.edu>; Jamie Ball <jamie.ball@ace.edu>

Hello Laurie,

The updated proposal is approved. I will document the changes in the IRB records. Best wishes on the next steps of your dissertation.

Tiffany Hamlett, Ph. D.

Chair, Institutional Review Board

American College of Education

101 W Ohio, Suite 1200, Indianapolis, IN 46204

Email: irb@ace.eduace.edu

Appendix K

Research Questions and Interview Questions Alignment Matrix

Research Question One (RQ1): How do students at a large suburban community college on Long Island in New York feel about the online-learning experience under extreme or unforeseen circumstances?

Research Question Two (RQ2): How do students at a large suburban community college on Long Island in New York perceive motivation when studying online under extreme or unforeseen circumstances?

Research Question Three (RQ3): What are the perceptions of students at a large suburban community college on Long Island in New York about online engagement when studying under extreme or unforeseen circumstances?

Research Questions Aligned	Interview Questions
RQ1	Question 1: 1. <i>Describe your online learning experiences prior to the pandemic.</i>
RQ1	Question 2: 2. <i>Describe your online learning experience during the pandemic.</i>
RQ2	Question 3: 3. <i>What were some negatives or challenges you experienced with online learning?</i>
RQ2	Question 4: 4. <i>What were some positives you experienced with online learning?</i>
RQ3	Question 5: 5. <i>How did you feel about the academic support you received from your course professor?</i>
RQ3	Question 6: 6. <i>How would you describe your level of engagement with online learning?</i>