

DOES QUALITY MATTER? A LOOK AT QUALITY MATTERS IMPACT ON  
ONLINE DOCTORAL STUDENTS OF QUALITY ASSURANCE

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Doctor of Education

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by

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## **DEDICATION**

To my parents, who have been my support system throughout my entire journey not just with this doctoral program but from the very beginning. To Sandra, who has encouraged me every step of the way holding down the family while I went to the library. To my grandparents, I wish that you could see me achieve this milestone but I know that are looking down on me smiling. To Roderick, thank you for being so supportive during this journey. To my extended family, thank you for all of your love and support. None of this would be possible with all of my family being there for me during these past 4 years.

To Lamar university, thank you for allowing me the opportunity to develop and learn as I progressed through my career. There have been so many great faculty, staff, and students that I have met throughout my time here and I am so grateful for that. I would not be in this position if it wasn't for the guidance of Ms. Karen Roebuck, the encouragement of Dr. Cynthia Cummings, the countless support and of Dr. Elizabeth Long, the unlimited support from Dr. Kyle Boudreaux, and all of the advice and constant assistance from Mr. Richard Varner.

Do not let anyone tell you that dreams cannot come true and goals cannot be accomplished. As long as you put in the work and dedicate yourself to them the sky's the limit.

## **ABSTRACT**

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### **Purpose**

The purpose of this qualitative study was to analyze doctoral online students' perceptions of doctoral online learning to ascertain if student views aligned with the Quality Matters (QM) standards. The surveys and interviews that were conducted for this study were used to extrapolate and analyze the views from these online students of the implementation of the Quality Matters rubric to determine whether there was a level of quality assurance.

### **Methods**

With the implementation of both a survey and conducting interviews, the data helped comprehend the participants perception towards online learning. The participants interviews were recorded, transcribed, and analyzed. A cluster analysis was implemented to determine emerging themes from the experience of the participants.

### **Findings**

To seek if quality assurance is present amongst online learning in accordance with the QM rubric, eight participants were interviewed to examine their perception of said quality assurance. This study discovered the most vital components that students feel are fundamental to their learning process. Overall, these doctoral education online students collectively thought that their spring 2020 online course was designed and developed with high quality. They conferred their thoughts about the importance of detail with

course learning objectives, the use and access of instructional materials in the course, and having that relationship with their fellow students and the instructors in the course establishing a high level of communication. Future research should look at examining faculty perception of the QM rubric to determine if they perceive it to be positive. Also, examining other rubrics that measure quality of online learning.

**KEY WORDS:** Quality Matters, Student perception, Quality assurance, Online learning.

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## **CHAPTER I**

### **Introduction to the Study**

The rise of online education, and its projected growth, lead one to ask: what actions must an educational system take to be successful in implementing online courses? There are two primary objectives for a superior higher education system overall, (1) providing access for all who want to learn and (2) providing a tool so all who want to teach can find their learners. Online learning is readily accessible with the assistance of technology (Manning-Ouellette & Black, 2017). The rise of the Internet and personal computers has fulfilled these previously impossible outcomes. This technology is slowly being utilized expanding the student experience including their learning environment and everyday tasks (Manning-Ouellette & Black, 2017).

Online learning has transformed the way educational content is delivered to students. Over the last 10 years online learning has progressed is described for the most part to factors including the production of the Internet and other digital learning instruments (Milheim, 2012). While the future of distance learning continues to lie with the Internet and the World Wide Web, new forms of software, communication technologies, and learning platforms are fueling a move from one-way transmission of knowledge to two-way, interactive communication and collaboration between instructors and students. While the forthcoming outlook of online learning focuses on the continuation of the Internet and the World Wide Web, new types of programming, communicating with technology, and platforms for learning are fueling a move from one-way transmission of information to two-way, engaging communication and associations with student-instructor interaction (Bates, 2005). Comprehending the effectiveness of

online learning is of great importance (Driscoll, et al., 2012). As defined by Greenberg (1998), online learning is a “planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning” (p.36). Over the last 20 years, the growth of online learning has been dramatic (Hill, 2012). In 2006, Young and Chamberlain conducted research that indicated the continuum from face-to-face on campus courses to fully online courses has diminished significantly and will soon cease to exist. The presence of online courses provide access to not only numerous methods of instruction but also flexibility (Sitzmann et al., 2006). Between 2015 and 2016, enrollment in online courses has risen at a much faster pace when compared to the previous three years (Friedman, 2018). In the fall semester of 2016, 6.3 million students were enrolled in at least one online course (Friedman, 2018). According to higher education institutions, the trend of increasing enrollment in online courses will continue (Allen, Seaman, Poulin, & Straut, 2016).

With the advent of online learning, post-secondary institutions have had an opportunity to expand access to their curriculum to learners who might not be able to come to campus on a regular schedule due to barriers such as employment, dependents, disabilities, or transportation (Betts, 2017). Online courses provide a level of convenience, especially for students who are working full time (Dosch, 2010). Online courses can be accessed anywhere in the world, especially in disadvantaged areas, being taught by the same faculty who are teaching those students who are located in privileged areas. Removing barriers and hindrances as prevailed to accessing online education, allowing everybody the chance to access education anytime and anyplace (Akash, 2018).

Due to this increased accessibility to online learning, it is now viewed as a major disruptive innovation in American higher education (Shattuck, 2014). Moreover, the development of online instruction has borrowed from concurrent growth in emerging technologies (New Media Consortium, 2012). Veletianos (2010) stated, “Emerging technologies are tools, concepts, innovations, and advancements utilized in diverse educational settings to serve varied education-related purposes” (p. 3). According to CLO Magazine, 72% of participants revealed increased engagement with mobile learning, and 70% of respondents revealed improved motivation to learn when they could utilize their mobile devices to navigate and explore courses effectively (Gutierrez, 2016). Having the opportunity to learn from a mobile device can make learning more personalized. Choices made by students in mobile technology make it simpler for them to connect and associate with one another, enabling them to form a learning community, which is critical to the learning process (Palloff & Pratt, 2013).

Along with the presence of mobile technology, instructors are becoming more proficient with the design and delivery of online courses. According to Nash (2005) and Picciano (2002) social presence is vital to course design that is “dependent upon the nature of student-student and student-instructor interaction” (p. 33). By incorporating the use of multimedia resources, online instruction has the ability to increase interaction and engagement in the course. Positive student satisfaction could be looked at as an indicator of student-instructor interaction which may reflect teaching methods that support learning goals and student expectations (Moore, 2005). Delivery of online content dictates a course’s organization, the types of interactions and connections among individuals of the learning community, the learner’s desires and expectations for the course, and the

methodologies used to facilitate and encourage learning (LaPointe & Reissetter, 2008). If done effectively, this delivery can aid in personal development and support regulation and independent learning (Reissetter, LaPointe, & Korcuska, 2007). Assuring quality education in online learning must either mirror or exceed what is being taught in face-to-face courses (Ulmer, Watson, & Derby, 2007).

Higher education institutions have been forced to reflect on their business models, which include development and delivery of instruction and student support services (Aslanian & Clinefelter, 2012). As such, creating a user-friendly online experience for students may be important to their development. A study was conducted by Ralston-Berg (2010) outlining the most critical variables students contribute to their success in online courses. These variables included clear guidelines in regard to how to begin a course, how to locate various course components, and how to access online resources. These variables can inform our benchmarks for designing quality education. Examination of student perceptions of online learning, based on the instructor's course design and development strategies, can contribute to the success and effectiveness of the course (Martin et. al, 2018). Palloff and Pratt (2007) noted that the following characteristics should be present with course delivery:

- Functionality (offering the capacities necessary to design and deliver the course)
- Ease of operation (user-friendly, simple to navigate)
- Visual appeal

A systematic framework and approach towards assuring quality is necessary for quality managers to reach the highest potential of online learning (Seyfried & Pohlenz,

2018). To ensure that online learning continues to be an integral part of higher education, assurance of quality should be a focal point. The evaluation and assessment of the quality of the program itself is characterized as the assessment of the majority of the components that constitute an online program (Marciniak, 2016). In spite of the fact that the level of distress might diminish for a few, skepticism about the quality of online education persists (Allen, Seaman, Lederman, & Jashik, 2012). Research conducted by Cavanaugh (2005) stated that face-to-face courses are one-and-a-half or two times less work for the instructor versus teaching online. Additionally, Cavanaugh (2005) noted that instructional designers and experienced online instructors need to warn professors who are new to online teaching to not apply their face-to-face teaching methods to online. Replicating the face-to-face environment into an online course has been considered a cause for concern because of the risk of less interaction among students (Milheim, 2012). The general success of online education significantly depends upon evaluation strategies incorporated with the program (Lee & Dziuban, 2002). In order to accomplish an assessment of quality assurance, a collection of student feedback should be analyzed (Shattuck, 2014). Gazza and Hunter (2014) encourages maintenance in online programs incorporating a social environment, course quality, and mindfulness of student characteristics. A strong community presence online can help to achieve a high level of retention. According to Shea and Bidjerano (2010) human interaction may have a positive effect on students' self-efficacy beliefs. Sustainability of high enrollment in higher education institutions depend on not only the perceptions of these students, but their learning experiences within the online environment (Rodriguez, Ooms, & Montañez, 2008).

## **Problem Statement**

Currently, a dearth of research exploring student perceptions of quality assurance in online learning exists. A study conducted by Kemp and Grieve (2014) revealed that undergraduate psychology students chose face-to-face activities rather than online. Another study by Tratnik (2017) showed noteworthy distinctions in satisfaction for English as a foreign language students between face-to-face learning and online learning. “Quality is a complex and difficult concept, one that depends on a range of factors arising from the student, the curriculum, the instructional design, technology used, and faculty characteristics (Meyer, 2002, p.101). Given the progressing discussion and debate around the authenticity of and defense for quality assurance in higher education, assessment of the impacts of quality within online learning, or the lack of quality, becomes paramount (Seyfried & Pohlenz, 2018). One factor that could be important in determining quality is student perception of whether quality is present in online courses.

One measure of quality assurance in online learning is the Quality Matters (QM) rubric. The QM rubric includes eight general standards broken down into 42 specific standards, designed and created by faculty with the goal of evaluating online courses and improving student learning in distance education (Jaggars, & Xu, 2016). The eight general standards are as follows:

1. course overview and introduction
2. learning objectives
3. assessment and measurement
4. instructional materials
5. learning activities and learner interaction

6. course technology
7. learner support
8. accessibility and usability

Applying and utilizing the QM standards in online courses is one way students can assess whether a course is of quality. QM is “a comprehensive external peer review designed to ensure quality in online courses (Swan, 2014, p. 87). Other studies and previous research have been very limited in examining student perception of an online course. Taylor (2016) analyzed undergraduate student perception of online learning from California State University using the Community of Inquiry (CoI). It was concluded that 95% of students would recommend the course that they had taken. Taylor (2016) stated that further research is needed to investigate student perception of online learning by conducting interviews. Therefore, this qualitative study sought to contribute information to the literature in evaluating student perception of quality assurance in online doctoral learning using the QM rubric.

### **Statement of the Purpose and Research Questions**

The purpose of this qualitative study was to analyze online doctoral online students’ perceptions of doctoral online learning to ascertain if students’ views aligned with the Quality Matters (QM) standards. The research addressed the following questions:

- 1) What are student perceptions of online course quality aligned on the Quality Matters (QM) rubric?
- 2) What is the relationship present between online course design and student perceptions of online course quality?

- 3) How does the age of online doctoral students impact their perceptions of online course quality?

The basis for applying a qualitative study was to understand the perspectives of adult online learners in terms of the design and development of their online course. The data compiled provided the opportunity to delve into the perspectives of students to better understand how they viewed online course design as it pertained to Quality Matters.

### **Rationale/Significance of the Study**

The significance of this study lies in bringing student voice/perception to the discussion regarding the quality of online learning. Literature has been published on perceptions of online students, but little research has been conducted on how student perception aligns with measurements of quality such as the QM standards. The research in this study incorporated student perception of QM-designed courses and provided data that could have an impact on the design and development of online courses at the university level. The information gained from the study could contribute to the literature aiding universities and colleges in determining if QM-designed courses have a positive impact on their students. Moreover, this study focused on the demographics of online students to explore possible relationships between student age and experience with online learning and the QM standards.

### **Assumptions**

During the course of this study, several assumptions were made. One assumption was that all participants would respond to interview and survey questions honestly, without reservation or bias. A second assumption was that participants provided a true representation of the university's online learning experience. A third assumption was

that, in order to complete the study survey, participants were familiar with and had mastered basic interviewing and computer skills.

### **Limitations/Delimitations**

There were several limitations to this study of student perceptions of online learning. The results of the study may not be applied to universities who did not utilize the Blackboard learning management system for faculty course development. Additionally, results from the study may not be applicable to universities or colleges that do not utilize the Quality Matters (QM) rubric or who use another form of measurement for quality.

This study had several delimitations as well. One of the delimitations was that the study was delimited to full time, doctoral, online students who were enrolled in the doctorate of education program at a large public university in southeast Texas between 2017-2020. Only one online doctoral education course was used for the study. This course passed the internal QM review. This course was not reviewed externally by Quality Matters. In order to make comparisons to student perceptions, an online doctoral course that had passed the Quality Matters assessment was utilized for the study. The study was also delimited to doctoral students who were enrolled in online course during the spring 2020 semester. In addition to that the study was delimited to adult learners, being of 25 years of age or older whom completed the online course during the spring 2020 semester.

**Definition of Terms**

- Accessibility and usability - the crafting of products that are useable for all learners (Quality Matters, 2018).
- Assessment and Measurement - the evaluation of a learner's progress toward achieving course learning objectives or mastering the competencies (Quality Matters, 2018).
- Constructivism - a learning theory in which learning is an active procedure in which learners construct new thoughts or concepts dependent upon their current or past knowledge (Brandon & All, 2010).
- Course Overview and Introduction - an overall design of a course that is clear to the learner at the start of the course (Quality Matters, 2018).
- Instructional materials - an assortment of inanimate materials that support the achieving of course learning objectives or competencies (Quality Matters, 2018).
- Instructional technology - the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning (Januszewski & Molenda, 2008).
- Learner Support – activities or interventions that facilitate learner access to institutional support services essential to learner success (Quality Matters, 2018).
- Learner Activities and Learner Interaction - a number of interactive learner assignments in online courses (Quality Matters, 2018).
- Learning Objectives - broad statements about what is to be accomplished and evaluated and assessed at the end of a course (Harden, 2002).

- Online learning - a form of education where students access content over the Internet, participate in virtual discussions with an instructor and other students, and submit assignments and receive feedback electronically (Laaser, 2011).
- Perception - the capability whereby people understand their environment (Crane, 2011).
- Quality Assurance - the identification of specific quality indicators that reflect desired inputs and outputs (Shattuck, 2014).
- Quality Matters - a set of standards used to review the design of online and blended courses (Quality Matters, 2018).

### **Summary and Organization of the Study**

Prior to conducting this study, approval was obtained from the Institutional Review Board (IRB) for the Protection of Human Subjects in Research at Sam Houston State University. Also, permission was obtained from the professor of the doctoral online course for their support in accessing student participation in the study and the use of course standards and all materials and assessments. In addition, the professor was asked to send a survey in their Blackboard online course to inform the students of this study and to ask for their participation.

This chapter included a general summary of the current comprehension of quality assurance of online learning, background of the problem, a statement of the purpose of the study, research questions, rationale/significance of the study, assumptions, limitations/delimitations, and definition of terms. The study is organized into five chapters, a bibliography, and appendices. In Chapter 1, the researcher introduced the study. In Chapter II, previous related literature is reviewed. In Chapter III, the

methodology is explained and supported through previous research. In Chapter IV, the findings of the study are presented and detailed. In Chapter V, the summary, conclusions, and recommendations will be offered and explored.

## **Chapter II**

### **Literature Review**

This review of the literature includes research and studies that contributed to this project. The literature gathered attests to the significance of the hypothetical basis of the investigation of adult learners' perceptions being included in the development and design of online courses. In this chapter, the review of the literature addressed the history and development of online learning. Another topic of importance examined was instructional design. Literature on motivation on the part of students towards online learning was also reviewed. Quality assurance and research on the Quality Matters rubric, detailing online course design, was explored. And lastly, student feedback and perception towards online learning was a focal point of this literature review.

The literature review was conducted with a combination of online searches and book reviews. Search terms employed were online learners, adult learners, e-learners, student perception, student feedback, student voice, distance education, distance learning, online learning, quality assurance, and course design. Databases used in the literature search included ProQuest, (Society for Research into Higher Education (SRHE), Taylor and Francis Online, ResearchGate, ERIC, and SAGE, in addition to Walden University Library and Google Scholar.

#### **History of Distance Learning**

In reviewing the literature regarding the evolution of distance learning, researchers have classified the types of distance learning into five "generations." It is imperative to know where distance learning originated and how it has evolved into what is known today. These generations serve as the foundation to comprehending not just the

meaning of distance learning, but also illustrate the evolution of quality and viable e-learning (Szapkiw & Szapkiw, 2010).

Distance education is defined as a method of teaching in which the student and instructor are physically separated (Kentnor, 2015). The idea of distance learning evolving through generations gives a supportive structure for understanding both the history and legacy of online learning (Simpson & Anderson, 2012). This teaching methodology is represented as online learning utilizing computers, tablets, and smart phones to access the Internet for the course materials. Distance education is also characterized as “institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors” (Schlosser & Simonson, 2009, p. 1). Knowing the history of distance learning illustrates significant improvements in terms of the delivery of academic content. Susan Aldridge, president of Drexel University, noted there will be a more noteworthy importance placed on utilizing modern day technology, for example, videoconferencing and automated telepresence, to provide collaboration among students and teachers who are in different locations (Friedman, 2018). Automatic telepresences are mobile robots that provide a virtual conference experience giving users the ability to speak and view the surroundings of the other end. The three generations labeled correspondence, broadcast, and computer mediated instruction are better known as teleconferencing (Simpson & Anderson, 2012). Similar to a distance family, each new age in the historical backdrop of distance learning does not consequently remove the past one, but rather exists closely to it, with the potential for shared reinforcement from each succeeding generation (Sumner, 2000). Other subsequent generations concentrated on

open universities and the Internet/Web. Open universities expanded upon the use of broadcasting and television, utilizing these media platforms for content delivery. Table 1 displays the five generations of distance education (Moore & Kearsley, 2005). They are correspondence, radio and television broadcasting, a combination of broadcasting and open universities, telelearning (teleconferencing), and online delivery through the Internet/Web.

Table 1. *Five Generations of Distance Education*

Generation	Generation Title and Main Features
1st	Correspondence – single medium (print) – mass production of technology - correspondence
2nd	Radio and television broadcasting
3rd	Combined approach – correspondence assisted by broadcasting (open universities)
4th	Telelearning – interactive audio/video conferencing
5th	Online delivery – multimedia interactive content with online communication and support

*Note:* Adapted from Distance education: A systems view (2<sup>nd</sup> ed.) by Moore and

Kearsley. Retrieved from

[https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2005 by Belmont/Wadsworth.

**First generation: Correspondence.** Distance learning began with courses of instruction that were conveyed by mail (Moore & Kearsley, 2012). Normally called

correspondence study, this type of instruction was likewise labeled as “home study” by early for-profit schools, and “independent study” by colleges (Moore & Kearsley, 2012, p. 23). Sumner (2000) stated that correspondence studies essentially include the utilization of print-based course materials and the postal service. What makes this first generation important was that it relied upon the development of the same factors that added to the birth of adult education (Hamilton, 1990). These correspondents were focused more on educating adults, more specifically women and people in the workforce. Driven by a solid feeling of social equity, correspondence education was given by an assortment of associations, some of which concentrated on qualifications (Simpson & Anderson, 2012). Later, land grant institutions were created in the United States in 1862 as part of the Morrill Act, which focused on individuals from all backgrounds via correspondence courses (Moore & Kearsley, 2005).

Correspondence also took place overseas as well. The Soviet Union introduced correspondence study to expand opportunities in education and to consolidate education with productive work (Young, Perraton, Jenkins, & Dodds, 1980). The important thought process for early correspondence educators was the vision of utilizing innovation to connect with those individuals who did not otherwise have an opportunity for education (Moore & Kearsley, 2012). Incorporating this type of study in different areas of the world opened up the realm of learning for many. Establishing an environment that promoted quality assurance for all demographic students was ethically, educationally, and economically needed (Shattuck, 2014).

As the demand for education began to grow, transformations were occurring in distance learning methodologies. Between the 1890’s and the 1930’s, there were more

than 200 correspondence schools such as the International Correspondence Schools (ICS) that offered correspondence instructions and covered an extensive variety of topics on professional subjects. Other schools included the Home Correspondence School of Springfield, Massachusetts and the American Farmers' School in Minneapolis, Minnesota (Moore & Kearsley, 2012). This instruction turned out to be increasingly organized, formalized, individualized, and professionalized, all of which positively served the distance learning framework. During this age of correspondence, an emphasis on managing students through material that was efficiently created and circulated was clear (Simpson & Anderson, 2012). Table 2 displays a summary of all of the aspects established during the period of the correspondence (Moore & Kearsley, 2005). The focus was on delivering the content from the printing press and books through the mail system. Correspondence study dealt with utilizing printed course materials and the mail service; this became the birth of adult education (Sumner, 2000). Adult education in higher education continues to be an important task within our education system (Wyatt, 2011).

Table 2. *Summary of First Generation: Correspondence*

Period	1451-1916 CE
Key Features	The printing press and books – correspondence – mass media and technologies
Pedagogy	Behaviourism (largely transmission of information)

Curriculum	Knowledges formulated and sanctioned by the powerful elite and embedded in gender, class, caste, and race/tribal assumptions and relations. The rise of the modern university and the development of the different disciplines. Mode 1 knowledge production
Content owner	Universities
Interaction	Content based and dominated by limitations of print technology – self pacing – mass delivery of DE
Medium	Text and images – also the advent of film
Production	Printing press, manual design and recording
Storage	Books and letters
Delivery	Mail system

*Note:* Adapted from Revisiting the five generations of distance education: Quo vadis?, by Heydenrych and Prinsloo. Retrieved from [https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2010 by Progressio.

**Second generation: Broadcast radio and television.** Broadcasting and multimedia were at the epicenter of the second generation of online learning. As new advances in technology developed, “the term correspondence was felt by numerous individuals to be excessively narrow” (Holmberg, 1989, p. 1), and distance education no longer aligned with merely print material and the postal service. Distance learning became focused on delivering content via the airwaves between the years of 1918-1955 (Moore & Kearsley, 2005). Numerous variables added to the development of the second era of distance learning: new correspondence advancements, developing refinement in the utilization of printed materials, and enhanced support aids for distance learning students (Keegan, 1990). According to Moore & Kearsley (2005), in 1934, the University of Iowa broadcasted educational television content in oral hygiene and astronomy. Broadcasts such as the University of Iowa courses considerably improved and contributed to the quality of distance learning (Evans & Nation, 2007). This early development of broadcasting content via the television served as a breakthrough, changing the manner of the learning. This development included improvements in media recording, film, animation, and radio and television. Table 3 displays a summary of all of the aspects associated with the period of broadcast radio and television (Moore & Kearsley, 2005). This period gave way to incorporating these multimedia tools (animation, video, and media recordings) in education improving and supporting the distance students. If this action was not taken to ground communication, it would have given few opportunities to serve the world (Sumner, 2000).

Table 3. *Summary of Second Generation: Broadcast Radio and Television*

Period	1918-1955
Key Features	Progress in media recording, film, animation, radio and television – mass media and technologies
Pedagogy	Behaviourism/cognitivism (still dominated by transmission of information)
Curriculum	Curricula formulated in different disciplines and embedded  in gender, class, caste, and race/tribal assumptions and relations. The discipline becomes the ruling mantra. Mode 1 knowledge production
Content owner	Universities
Interaction	Content based with limited interaction – mass delivery of DE and controlled access based on gender, class/caste, culture and age
Medium	Text, images, sound and video (film) – the start of instructional television
Production	Printing press, sound and video/ film recording, manual and computer design/ programming
Storage	Recordings – audio cassettes and video cassettes

Delivery	Mail system/television/ telephone/sound playback equipment
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*Note:* Adapted from Revisiting the five generations of distance education: Quo vadis?, by Heydenrych and Prinsloo. Retrieved from [https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2010 by Progressio.

**Third generation: Open universities.** To deliver such integrated multimedia programs, the Articulated Instructional Media project (AIM) promoted the idea of a course design group, consisting of instructional designers, innovation pros, and subject matter experts (Wedermeyer & Najem, 1969). Implementing this project opened the path for the birth of the open university. Open universities are defined as self-instructional universities that provide education through the use of computers, mailed materials, and television (Dictionary, 2019). Open universities according to Holmberg (1986, p. 30) were viewed as “the start of a more prominent era in the history of distance education.” Providing this access was viewed as significant and continued to be a solid driver of distance education (Simpson & Anderson, 2012). These institutions of higher learning were responsible for developing content and ensuring the content was delivered to students through distance learning methods (Hrydenrych & Prinsloo, 2010).

Wedermeyer, while working at the University of Madison-Wisconsin, examined the teaching process, viewed it as being composed of areas that required expert skills, and presented the concept of team growth of teaching materials (Wedermeyer & Najem, 1969). Team growth is looked at as building positive relationship amongst teachers using telecommunication tools such as telephones, data communication, and electronic mail.

Being able to deliver the content through different means such as mail, television, computers, and video was revolutionary. Table 4 displays a summary of all of the aspects associated with distance education during the period of the open university (Moore & Kearsley, 2005). Of note, combining the use of multimedia, correspondence, and broadcasting modernized and revitalized the way distance education was approached (Selman & Dampier, 1991). During this period, learning was viewed as a teacher-student interaction not having a social process (Heydenrych & Prinsloo, 2010). The focus of open universities was delivering the content through different media outlets such as television, computers, and the continuation of mail as done in the second generation. Expansion beyond computer assisted learning during the second generation was needed for these learners to concentrate on learning collaboratively based on communicating interactively (Heydenrych & Prinsloo, 2010).

Table 4. *Summary of Third Generation: Open Universities*

Period	1956-1968
Key Features	Multimedia, computer animation and computer-assisted learning, and telematics (telephony) – interactive content
Pedagogy	Behaviourism/cognitivism/constructivism
Curriculum	Curricula formulated in different disciplines and embedded in gender, class, caste, and race/tribal assumptions and relations. Mode 1 knowledge production

Content owner	University
Interaction	Mostly asynchronous with limited interaction – mass delivery of DE – computer-aided instruction – computer-assisted learning
Medium	Text, images, sound, video, instructional and live television
Production	Printing press, sound and video/film recording and computer design/programming
Storage	Recordings – audio cassettes and video cassettes – storage on disks
Delivery	Mail system/television/ telephone/computers/video and sound playback equipment – first computers used to send batches of data

*Note:* Adapted from Revisiting the five generations of distance education: Quo vadis?, by Heydenrych and Prinsloo. Retrieved from [https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2010 by Progressio.

**Fourth generation: Telelearning.** Electronic communication became the focal point of the fourth generation and other subsequent generations thereafter. Adding audio and video elements addressed the absence of synchronous learning that was only available through face-to-face learning, in that students could view lectures and other content on their own schedules. Both sound and video conferencing broadened interaction between learners and instructors and featured the need to improve instructor

facilitation skills (Burge & Howard, 1990). These advancements bolstered a move in distance learning from the prior spotlight on organization and instructional education to an attention to the social development of knowledge (Simpson & Anderson, 2012). With the presence of communication, student-student and student-instructor relationships could be formed to construct knowledge in a more social environment (Heydenrych & Prinsloo, 2010). Encouraging students and providing opportunities to interact and engage with other students played an integral role in supporting student success in the online courses (Dreon, 2013). Computer-mediated technology was at the forefront during the period from 1956-1968. These developments in distance education training were portrayed by the advancement of communities of inquiry, a focus on knowledge construction, and collaboration through student-student and instructor-student interactions (Simpson & Anderson, 2012). Table 5 displays a summary of all of the aspects associated during the generation of teleconferencing (Moore & Kearsley, 2005). The focus was on delivering content through different outlets such as video, computers, programming, and print media. With the advent of the fourth generation of distance education, two-way communication, such as video conferencing, allowed for the direct interaction that the third generation was missing (Moore & Kearsley, 2005). Universities began to adopt more pedagogical theories such as constructivism and behaviorism to experiment with learning collaboratively (Heydenrych & Prinsloo, 2010).

Table 5. *Summary of Fourth Generation: Telelearning*

Period	1969-2005
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Key Features	Video-conferencing, audio-graphics, the Internet and WWW – sharing of resources, asynchronous and live communication – integration of media and technology for multiple platforms (freedom to select) – student and teacher options
Pedagogy	Behaviourism/cognitivism/constructivism/social constructivism or constructionism/enactivism/connectivism
Curriculum	While disciplines and university knowledge still remain paramount, open educational resources (OERs), the corporate university, and other sites of knowledge production are increasingly impacting on the curriculum. The curriculum is moving beyond Mode 1 and Mode 2 knowledge and morphing into Mode 3 knowledge
Content owner	Universities and global community (dominated by so-called First-World content)
Interaction	Content starting to move away from the university – asynchronous and synchronous interaction – mass delivery becomes problematic and demands for interaction challenge ICTs
Medium	Text, images, sound and video

Delivery	Mail system/television/ telephone/computers/video and sound playback – equipment – computers starting to become a generic device and WWW (Internet) as a generic platform
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*Note:* Adapted from Revisiting the five generations of distance education: Quo vadis?, by Heydenrych and Prinsloo. Retrieved from [https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2010 by Progressio.

**Fifth Generation: Internet/Web.** Beginning in 2005, distance learning opportunities rapidly grew through the use of computer-mediated communications and the Internet, during which the fifth and current generation began (Simonson & Seepersaud, 2019). In 1995, Taylor (2001) first discussed the age of computer-mediated distance learning 10 years prior to the ending of the 4<sup>th</sup> generation. He posited that numerous higher education institutions were simply starting to implement distance learning's conceivable possibilities. Those possibilities quickly turned into viable ways in which to connect with the student. Instructors were able to distribute their course materials, assessments, and readings via the Internet; This type of dissemination, via Internet, allowed students to view videos, complete assessments, and participate in online dialogues with their fellow classmates (Simanson & Seepersaud, 2019). Table 6 displays a summary of all of the aspects associated with the period of the Internet/Web (Moore & Kearsley, 2005). The fifth generation concentrated on delivering content through different outlets such as video, computers, film recordings, and print, allowing a focus more on the development of the curriculum and implementing pedagogical practices geared toward learning (Heydenrych & Prinsloo, 2010). This generation build the

foundation for present day distance education, moving beyond using open resources, such as YouTube, and allowing for individualized learning experiences for self-organization of learning (Heydenrych & Prinsloo, 2010).

Table 6. *Summary of Fifth Generation: Internet/Web*

Period	Present day
Key Features	Video-conferencing, audio-graphics, the Internet and WWW – sharing of resources, asynchronous and live communication – integration of media and technology for multiple platforms (freedom to select) – learner and teacher options – the rise of Web 2 technologies
Pedagogy	Behaviourism/cognitivism/constructivism/social constructivism
Curriculum	As more and more knowledge producers (formal, informal and self-publishing) enter the market, the curricula increasingly become open and fluid. Open educational resources and the use of YouTube and other social technologies are changing the nature of knowledge, the curriculum and the validation of knowledge
Content owner	Universities and global community
Interaction	Content starting to move away from the university – asynchronous and synchronous interaction – mass delivery

	becomes problematic and demands for interaction challenge ICTs
Medium	Text, images, sound and video
Production	Printing press, sound and video/ film recording and computer design/ programming/user involvement
Storage	Digital storage media (CD, DVD, memory sticks, central servers, hard drives, etc.)
Delivery	Mail system/television/ telephone/computers/video and sound playback – equipment – computers starting to become a generic device and WWW (Internet) as a generic platform

*Note:* Adapted from Revisiting the five generations of distance education: Quo vadis?, by Heydenrych and Prinsloo. Retrieved from [https://www.academia.edu/3011651/Revisiting\\_the\\_five\\_generations\\_of\\_distance\\_education\\_Quo\\_vadis](https://www.academia.edu/3011651/Revisiting_the_five_generations_of_distance_education_Quo_vadis) Copyright 2010 by Progressio.

### **Efficacy of Distance Learning**

Self-efficacy is defined as “beliefs in one’s abilities to organize and perform the courses of action essential to produce given achievements” (Bandura, 1997, p. 3). Kuo, Walker, Schroder, and Belland (2014) conducted an online study of 180 undergraduate and graduate students taking online courses. The survey results revealed self-efficacy of the Internet had a positive significant impact on learning but had a weak relationship with student satisfaction. For students to achieve this satisfaction, they must believe in their abilities to accomplish the learning outcomes from this nontraditional delivery system

(Liaw, 2008). Martin and Tuffy (2008) created an instrument measuring self-efficacy towards Learning Management Systems (LMS) based on 5 parts: (1) assessing course content, (2) tests and grades, (3) asynchronous communication, (4) synchronous communication, and (5) advanced tools. An LMS is a general term utilized to depict different systems giving online educational services to students, instructors, and administrators (Aldiab, Chowdhury, Kootsookos, Alam, & Allhibi, 2018). Results from Martin and Tuffy (2008) showed self-efficacy towards the LMS did not have an impact on student performance in online courses. Creating an online course based on instructional design can help with any lack of self-efficacy in using online technologies rather than reservations students may possess. Proper course design and development can prove to be beneficial, for not only quality assurance but self-efficacy of the students.

### **Instructional Design**

The field of instructional design (ID) and technology includes the analysis of learning and execution issues, as well as the design, development, implementation, assessment, and management of instructional and non-instructional procedures (Reiser & Dempsey, 2012). ID is a vital consideration in moving distance learning towards achieving quality assurance. A change in the process of developing and designing online courses is necessary, which can fundamentally affect a student's satisfaction (Milheim, 2012). Part of the ID process occurs with certain learning models that are centered around the framework of design. Those learning theories are Gagne's Theory of Instruction and Constructivist Theory. Best practices and ID models bolster the utilization of assessment information to review the online course to indicate the need for revisions (Morris, Ross,

Kalman, & Kemp, 2012). A review of the literature explaining these theories will help to illustrate the impact on online learning.

The process of structuring online courses has few strategies in comparison to customary face-to-face courses with instructors who align content specifically with teaching methods in order to maximize student learning (Alexiou-Ray & Bentley, 2015). With the advent of learning management systems (LMS), professors were able to create a learning environment with online discussions, feedback from professors, and embedded online activities (Shattuck, 2014). Aldiab et. al (2018) stated it is imperative for all colleges to concentrate on the advantages related with any LMS, such as the students' performance during the course and the students' results after they completed a course. In the next section, topics that will be discussed in relation to ID are Gagne's Theory of Instruction, Constructivism, obstacles that learners face, and adult learners.

**Gagne's Theory of Instruction.** The first ID theory, Gagne's Theory of Instruction, was developed to identify the needed conditions for learning and designing instruction (Gagne, Briggs, & Wager, 1992). The main focus of this theory was on instruction and how what is known about learning can relate to how instruction is designed (Reiser & Dempsey, 2012). Gagne's theory (Reiser & Dempsey, 2012) is comprised of three components:

- A taxonomy of learning outcomes that defined the types of capabilities humans can learn
- Internal and external learning conditions associated with the acquisition of each category of learning outcome

- Nine events of instruction that each facilitate a specific cognitive process during learning

While learning outcomes are unique to the conditions of learning, there are other factors that contribute to the learning process. Table 7 below displays Gagne's Nine Events of Instruction (Miner, Mallow, Theeke, & Barnes, 2015). According to Gagne, Briggs, and Wager (1992), these events should fulfill or give the necessary conditions for learning and serve as the basis for designing instruction and choosing the media that best fits with that content. These events of instruction can assist with advancing student learning and increasing retention (Gagne & Medsker, 1996).

Table 7. *Gagne's Nine Events of Instruction*

Gain attention
Inform the learners of objectives
Stimulate recall of prior learning
Present the content
Provide guidance
Elicit performance
Provide feedback
Assess performance
Enhance retention and transfer to the job

*Note:* Adapted from How to Apply Gagne's 9 Events of Instruction In eLearning by Pappas. Retrieved from <https://elearningindustry.com/how-to-apply-gagnes-9-events-of-instruction-in-elearning> Copyright 2015 by eLearning Industry.

**Constructivism.** The second ID theory, Constructivism, emerged by the 1980's and 1990's as an alternative to Behaviorism, in that students use their experience and knowledge to construct learning of their own (Snyder, 2009). Constructivism is an ID model positing that learners develop their insight from individual encounters and from thoroughly considering these encounters (Loyens, Rickers, & Schmidt, 2009; Windschitl & Andre, 1998). This theory focuses around providing a more student-centered learning agenda, and asking students to determine learning outcomes on their own (Schell & Janicki, 2013). According to Reiser and Dempsey (2012) creating student-centered learning environments should:

- Engage learners in activities authentic to the discipline in which they are learning;
- Provide for collaboration and the opportunity to engage multiple perspectives on what is being learned;
- Support learners in setting their own goals and regulating their own learning; and
- Encourage learners to reflect on what and how they are learning.

Brandt (1997) noted that students develop their learning by comprehending encounters as far as what is already known. Applying previous knowledge gained by the student allows for that knowledge to be transferred and potentially establish new information. This knowledge transfer emphasizes knowledge construction and problem solving in domains of increasing conceptual complexity (Schell & Janicki, 2013).

**Online learning obstacles.** There are several obstacles to effective online learning. Distance learning instructors at colleges and universities pinpoint concerns with the quality and effectiveness online learning (Markova & Glazkova, & Zaborova (2016).

One major concern is the disagreement between educators on how to evaluate quality and effectiveness (Markova, Glazkova, & Zaborova, 2016).

Muilenburg and Berge (2005) conducted an exploratory factor analysis that illustrated fundamental paradigms involving student barriers to online learning. The study concentrated on student perceptions based on a variety of different variables: (a) gender, (b) age, (c) self-reported ethnicity, (d) type of learning institution, (e) ability and confidence with online learning technology, (f) learning effectiveness in the online environment, (g) learning enjoyment in the online classroom, (h) number of online courses completed, (i) number of online courses dropped, (j) likelihood of taking a future online course, and (k) whether or not students experienced prejudicial treatment in the traditional classroom due to cultural background, disability, or other personal characteristic (Muilenburg & Berge, 2005).

Results showed that of the 47 variables studied, 8 of these showed to be barriers to student learning (Muilenburg & Berge, 2005). Some of these barriers included technical problems, time and support for studies, learner motivation, and academic skills (Muilenburg & Berge, 2005). Advocates for face-to-face instruction also express that students who take online courses will in general feel increasingly confused, confined, and disappointed, and therefore their learning effectiveness and fulfillment can be decreased (Markova, Glazkova, & Zaborova, 2016).

Markova et al. (2016) conducted a study of online students' satisfaction with their distance learning experience. Despite their satisfaction rating moderately high with 53.1% of the participants stating they would prefer to take an online course, there was some disagreement. Participants noted a lack of interaction, feeling isolated, and the lack

of self-organization (Markova et al., 2016). Executing a plan of action towards self-efficacy can help ease student anxiety and possibly reduce stress (Bandura, 1997).

**Adult online learners.** Educators, instructional designers, and professionals working in the design of online environments for adults should comprehend adult learning theory, particularly in terms of its relationship to distance learning (Cercone, 2008). Adult learning, defined by Osgood-Treston (2001), is depicted of those individuals being age 25 or older who have needs-based objectives, various duties, and experience that adds to their learning. Elements of the ID process that work toward promoting online learning communities for adult learners include goals, methods, and values (Snyder, 2009). According to Park and Choi (2009), the quantity of adult learners who take an interest in online learning has quickly increased over the last two decades due to numerous favorable advantages. Those advantages include allowing a more flexible schedule for students who have families and those who want to update their skill set to align with their career. However, those family issues, in addition to a lack of support from work, changing careers, and the amount of school work are contributing factors that could cause dropouts to occur in online courses (Willging & Johnson, 2004). Factors that influence this increase in online education can be attributed to geographic location, personal and family duties, work and family-related action plans, past encounters in school, absence of sufficient and consistent childcare services, monetary constraints, and in a few occasions, a general fear of going back to school (Kimmel, Gaylor, & Haynes, 2014).

Additionally, adult learners have learning needs that are unique in relation to those of traditional students (Yoo & Huang, 2013). One of those needs includes having

employers of these adult learners expand their areas of skills for career advancement (Yukselturk & Inan, 2006). To support this need adult learners could work collaboratively with one another sharing their knowledge and ideas in an online environment. Also, online learning enables non-traditional students to keep up with their employment and family duties while proceeding with their education. This may be because online learning provides an adaptable schedule and minimal travel costs (Hung, Chou, Chen, & Own, 2010).

Kimmel, Gaylor, & Haynes (2016) conducted a study that analyzed age contrasts among adult students over the age of 25 and their aspirations and boundaries to higher education. Factors studied include the following: learning style, life events, employment, parental role, early education achievement, work experience, work status, socio-economic status, family role, socialization, gender, and persistence. The results of the study showed that more adult respondents (students who were 35 years old and more established) were less motivated than more youthful respondents to look for advanced education due to a need for additional compensation ( $p = .003$ ), a need for another profession ( $p = .003$ ), or a need for more regard from friends ( $p = .016$ ) (Kimmel, Gaylor, & Haynes, 2016). Younger respondents (24 years and more youthful) were almost certain to be propelled to seek advanced education by their parents than more seasoned respondents ( $p = .000$ ) (Kimmel, Gaylor, and Haynes, 2016).

Finally, adult learners may have some limitations that vary from traditional students, which should be considered in the design aspect of distance learning (Cerccone, 2008). Some best practices for online course design to combat these limitations are

inclusion of a clear menu structure, graphics and images, and easy to read fonts and soft colors (Cerccone, 2008).

**Perceptions of adult online learners.** Student perception is vital and should be included in the process of developing, designing, and ultimately the execution of online courses (Sahin & Shelly, 2008). Little research has been conducted that examines adult learners' perceptions and from online graduate doctoral degree programs from higher education institutions. Fischman (2011) postulated that this absence of research may have caused numerous motivation and engagement issues in online degree programs that could potentially have impacted completion of the degree program and dropout rates. Online learning in higher education has continued to increase at a rapid pace, yet these online programs are struggling with low retention rates (Brow, Keppell, Hughes, Hard, & Smith, 2013). There are several techniques or aspects that have been shown to increase satisfaction for adults taking online courses. Reflection is an essential technique used in online courses to encourage the instructor to comprehend what the student has received from the instructional content (Martin, Wang, & Sadaf, 2018). This is critical in online learning particularly when various techniques are analyzed for the design and facilitation of online learning (Martin et. al, 2018). As indicated by Milheim (2012), absence of interaction or feedback from instructors and course design that does not bolster student-student interactions are parts of online course design that should be reviewed in order to improve student motivation and viability. Adult learners, according to Knowles (1989), take part in self-coordinated learning and then are more free, independent, self-governing, confident, and self-coordinated towards obtaining their goals. Finally, adults bring experiences from their personal and working lives that could be utilized as assets for

them in identifying the content being studied (Morrison et. al, 2019). By understanding adult students' career contexts, instructors may develop more compelling programming and better student services (Bohonos, 2014).

Analysts have discovered that motivation within students increases when presented with student-student and student-instructor interactions (Duncan, Range, & Hvidston, 2013). Student engagement can diminish the feeling of segregation and improve student performance in online courses (Martin et. al, 2018). Sun, Thai, Chen, and Yeh (2008) conducted a study to determine critical variables impacting student perceptions and fulfillment. Results of the study found that the instructor's state of mind toward distance learning, course quality, perceptions of content usefulness, course adaptability, and student computer anxiety were essential variables affecting perceptions and fulfillment. A similar study conducted by Ozkan and Koseler (2009) supported the findings (Sun et al., 2008) in discovering that the quality of the instructor, framework quality, and the quality of the content were observed to be related to student fulfillment. Cho & Cho (2014) utilized a study of 158 students and found that the instructors' job as a facilitator for social interaction is vital towards making a positive environment online, thus creating a design that encourages engagement amongst students. Personal interaction amongst all participants (students and instructors) should occur at the beginning of the course to establish a strong rapport between them (Thormann & Zimmerman, 2012).

### **Motivation**

Motivation as defined by Charles and Senter (1995) alludes to a desire or the reason behind why individuals accomplish something. This concept applies directly to online learning. There are several factors that affect adult learner motivation in online courses. It

is a necessity that learner engagement be supported by learner motivation, student-student and student-instructor interactions, and support from the university (Leach & Zepke, 2011). When an online environment has a variety of ways to communicate with one another in the course, students will feel more satisfied and motivated with their learning (Yang & Cornelius, 2004). Mentorship conducted by a faculty member providing progress reports, student contact on a regular basis, and connecting on a personal level with the students are all interpersonal interactions towards lowering retention (Gazza & Hunker, 2014).

One factor affecting motivation may be attitude. Brinkerhoff and Koroghlanian (2007) found an instructor's attitude impacts a student's success or fulfillment in online courses and could improve a student's motivation towards learning. It also builds the profundity and nature of students' interaction and discussions (Dennen, 2011). Another factor affecting motivation is persistence. Persistence is defined as "the behavior of continuing action despite the presence of obstacles" (Rovai, p. 1, 2003). It is an important measure of higher education program effectiveness (Rovai, 2003). Holder (2007) examined indicators of student persistence in online higher education programs. After gathering responses from 259 participants, Holder's research revealed that emotional support, self-viability, managing of time, and learner autonomy were persuasive components in online learning.

Next, strategies to encourage motivation will be considered. Banna, Lin, Stewart, and Fialkowski (2015) stressed that commitment is the key ingredient for the issue of student isolation, dropout, retention, and graduation rates in online learning. For those students who encounter a feeling of detachment from the physical presence of an

institution and student services, it is important to have resources available so they may be effective in completing their online courses (Gazza & Hunker, 2014). Eagerness of students to enroll in online courses displays their motivation toward accomplishing their learning goals (Law, Geng, & Li, 2019). Garces-Ozanne and Sullivan (2014) discussed that assessment of student learning objectives, especially if the assessments are graded, affected student fulfillment in a positive way. Yoo and Huang (2013) stated in order to propel our comprehension of adult learners' engagement issues in online learning, we online adult learners' motivational variables, that can prompt to their ultimate engagement with the online programs, should first be investigated.

With regards to online guidance with motivation, Yoo and Huang (2013) suggest there are two critical inquiries that instructors must consider:

1. "What motivational factors are relevant to online adult learners for their online engagement?" (p. 154).
2. "How do online adult learners' gender, age, and prior experiences impact the motivational factors in order to engage with the online learning process?" (p. 154).

Educators should look for and implement effective techniques for facilitating discussions online as ways to elevate students' motivation to participate in productive discussions, in socio-passionate exchanges, and engaging in authentic learning (Rovai, 2007).

Another broad area in motivation is the social environment the instructor creates in the class. Social presence means that the atmosphere of the learning environment is one in which students feel challenged and pushed in academic ways, not necessarily that

all participants feel comfortable all of the time. (Blaine, 2019). Blaine (2019) also implied having a social presence is defined as an environment that is conducive to students being challenged academically and not just relating to the students having a comfort level. Moore (1989) identified three kinds of interactions that happened online: learner-instructor, learner-content, and learner-learner. Making changes to existing face-to-face courses to meet these interactions in online learning requires a great deal of resources (Rodriguez, Ooms, & Montanez, 2008). Incorporating this student-centered learning into an online environment could prove to be just as vital. Research has shown that interactions with peers, content, and instructors aid online learners to become vigorous and increasingly engaged in the course (Lear, Ansorge, & Steckelberg, 2010). Additionally, Author and Parker (2014) discovered that instructors who utilized synchronous tools to promote interaction were able to build a feeling of community and to provide an opportunity for students from various locations to be able to participate. According to Landcaster and Landcaster (2016) more instructor involvement can decrease the quantity of students who withdraw or fail the online course, and the equivalent is also true for more student to student interaction. Other researchers have discovered that student engagement raises student fulfillment, improves student motivation, lessens the feeling of being isolated, and improves student execution in online courses (Martin et. al, 2018). Effective engagement with adult learners must be a collective and collaborative effort between the administration, faculty, and student service staff, as well as instructors, and staff accountable for supporting projects, and the curriculum (Yoo & Huang, 2013).

Lastly, the impact of authentic learning is considered. Fulfillment of students towards online courses seems, by all accounts, to be a multidimensional approach, including learner-instructor interaction, learner-learner interaction, learner-content interaction, course design, regulatory issues, facilitator, support, and method of delivery (Roberts et al., 2005). Aviv (2004) revealed that online learners' strongest motivations for seeking further learning were related to their own life circumstances and individual motivations. Incorporating assessments in online courses that have real life problems provide the learners opportunities to explore and communicate about these issues amongst one another (Mims, 2003).

In addition to the strategies listed above, one should not lose sight of the fact that today's online student is typically a working professional with family obligations (Park & Choi, 2009). Sockalingham (2012) discussed that adult learners' time is valuable and instructors need to be mindful by outlining specific instructions to follow towards expectations. Moreover, learning materials should be of the highest quality, appropriate for the course level, and consistent with the amount of time the student has to study.

### **Quality Assurance**

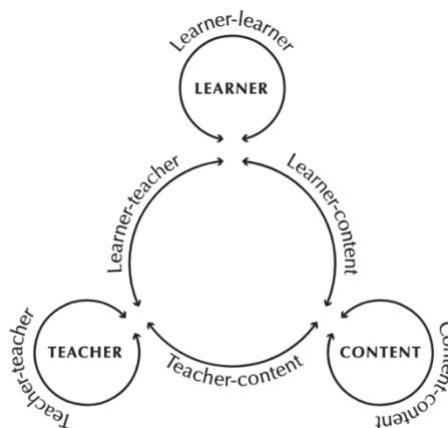
Another element discussed in the review of the literature is the development of quality assurance processes and procedures. Quality assurance is defined as a "systematic, structured, and continuous attention to quality in terms of quality maintenance and improvement" (Vroeijenstijn, 1995, p. 30). Distance learning is not equal to traditional face-to-face approaches; therefore, the quality assurance procedures and models should not be used for both deliveries of education (Shattuck, 2014). Establishing a plan of action by applying quality instructional design strategies in online

learning is key to success (McGahan, Jackson, & Premer, 2015). No matter the procedure or approach, quality assurance methods can be utilized to construct self-confidence in students, and additionally to confirm key components for success of the online course are assimilated into the online course structure (McGahan, Jackson, & Premer, 2015).

Benchmarks for high quality design that address learning outcomes, pre-requirements, and grading policies all have implications for an institution's curriculum procedures (Shattuck, 2014).

A systematic framework and approach towards quality assurance is necessary for quality managers to reach the highest potential of online learning (Seyfried & Pohlenz, 2018). In a functioning community of inquiry-based instruction, students “engage in a combination of dialogue and reflection to question their existing assumptions about a subject matter and ultimately construct new knowledge” (Stewart, 2017, p. 68). Moore and Kearsley (2012) explained, since distance learning required utilizing a scope of specialized resources, it is in every case, best conveyed in a system that is comprised of all the components that work when educating and learning at a distance happens. Distance learning incorporates learning, educating, correspondence, design, and management (Thormann & Zimmerman, 2012). These elements all need to be addressed in order to establish an online learning environment that is conducive for all students (Thormann & Zimmerman, 2012). According to Shattuck (2014), online course instructors ought to think about expectations, learning inclinations, sociocultural conditions, communication styles, language barriers, and how to design and develop online courses.

For higher education institutions in the United States, quality assurance was controlled largely by regional accreditors such as the Association to Advance Collegiate Schools of Business and the National Council of Accreditation of Teacher Education (Shelton, 2010). One of the major challenges of establishing quality assurance is having faculty members and stakeholders involved unified and being on the same page (Ryan, 2015). It is vital to consider that the institution, mainly the administrators, faculty, and staff be involved in the course development process (Tobin, Manderach, & Taylor, 2015). Recognizing students' points of view will be required for institutions looking to gain an advantage against other schools for quality assurance purposes (Shattuck, 2014). The development of distance education programs has given an opportunity for all stakeholders involved to assess the online course content and results of the course (Shattuck, 2014). Rushby and Surry (2016) proposed diverse segments of online programming which include curriculum information, general learning outcomes, program content, learning assessments, data sources, tools for communication, media utilization, and techniques for the appraisal of the learning process. Shown in Figure 1, Anderson (2004) outlines six aspects of educational interactions in the online environment.



*Figure 1. Educational interactions, (Anderson, 2004)."*

As the figure illustrates, learner-content interaction results in behavior on the student's part allowing for content that can be customized, supporting needs of all types of learners (Anderson, 2004). Advantages to using this approach are using an adaptive interface designing the online environment to suit the learner and creating a user-friendly navigation experience (Eklund, 1995). Learner-teacher interaction occurs in numerous ways such as communication, video, and text (Anderson, 2004). Teacher-content interaction hones in on content that was crafted by the teacher; it allows the instructor the ability to design and develop course content including assessments and resources (Anderson, 2004).

Accreditation is the main means by which higher education institutions ensure quality to, not only the student body, but the public as well (Eaton, 2006). Identifying whether an online course is of high quality involves a process of reviewing guidelines associated by a regional accreditation organization (Shattuck, 2014). As far as thoroughness and content, accreditation standards necessitate that distance learning

courses be equal to, or better than, those taught in a face-to-face traditional environment (Shattuck, 2014). Realizing the importance of distance education, these accreditation standards have focused attention on expanding upon ideals of traditional learning to include distance learning.

There are three quality assurance measurements described in the literature. Organizations that focus on accreditation aspect are the Council for Higher Education Accreditation (CHEA) and the Higher Learning Commission (HLC). The Online Learning Consortium (OLC) formally known as Sloan C established the Sloan Consortium Pillars and the Quality Scorecard (QSC) which focuses on establishing policies and procedures for guiding online learning. Evaluations of these online courses need to be an ongoing process that support a strong commitment towards quality assurance (Shattuck, 2014).

**Council for Higher Education Accreditation (CHEA).** The first quality assurance measurement to be developed was the CHEA. CHEA's focus addresses the threat of political pressure to institutional independence and scholastic freedom. It is also seen as fundamental to quality instruction and includes that such risk "shows no promise of abatement" (CHEA, 2012 p. 1). Academic freedom could be threatened because of the political environment we live in. Founded in 1996, CHEA's mission is to serve students and their families, schools, and colleges, sponsoring bodies, governments, and employees by advancing academic quality through formal acknowledgement of higher education certification bodies. CHEA facilitates and works to propel self-regulation through accreditation (Council for Higher Accreditation, 2015). CHEA's principles concentrate on seven key elements that center around the improvement of quality in higher education

learning – quality assurance, leadership, advocacy, service, core values, independence, and inclusion. These principles contribute to maintaining and improving quality on an academic level (Eaton, 2006).

**Higher Learning Commission (HLC).** The HLC's (n.d.) mission is to give general data about the criteria for accreditation, frequently asked questions, and assets of higher education institutions. HLC was founded in 1985. Its focus hones in on increasing organizational value to the members, innovation, student success, thought leadership, and advocacy. This focus is better known as VISTA. This initiative is described as follows (HLC, n.d.): The value to the members is through quality assurance and advancement. Innovation focuses on incorporating technology while maintaining quality assurance. Achieving student success needs to be a collaborative effort on the part of HLC and the institution focused on the reasons why students seek higher education. Utilizing HLC as an asset for thought leadership encourages the application of technology ideas to assure quality. HLC's advocacy approach centers around the effectiveness of implementing a peer review process with the goal of achieving quality assurance.

**Online Learning Consortium (OLC).** OLC was created in 2008 as a nonprofit organization with assistance from the Alfred P. Sloan Foundation (Straumsheim, 2014). The Quality Score Card (QSC) for the Administration of Online Education Programs gives an approach for institutions to assess administrative practices in online learning (Shelton, 2010). The scorecard measures and evaluates 70 quality markers within distance learning programs (Shattuck, 2014). The core of the score card is based on five pillars of quality education online through learning, faculty, students, scale, and access

(Moore, 2005). Sloan-C defined these pillars as “a framework for measuring and improving an online program within any institution” (Lorenzo & Moore, 2002, p. 3).

### **Quality Matters**

In order to ensure quality in distance learning, the Quality Matters rubric was developed. Quality Matters (QM) is “a comprehensive external peer review designed to ensure quality in online courses (Swan, 2014, p. 87). It incorporates an evaluation rubric of institutional commitment, courses, curricula, instruction, assessment practices, student support, faculty support, and program assessment practices (Shattuck, 2014). This rubric was developed in 2003 as a part of a Fund for the Improvement of Postsecondary Education (FIPSE) grant that was awarded to MarylandOnline (Tobin, Mandernach, & Taylor, 2015). When QM began, it was comprised of eight general standards that covered 41 specific review standards detailing best practices for online course design and development (Shattuck, 2014). Currently, QM has 42 specific review standards. The eight general standards are course overview and introduction, learning objectives, assessment and measurement, instructional materials, learning activities and learner interaction, course technology, learner support, and accessibility and usability (Quality Matters, 2018). Its systematic approach centers around measuring for quality assurance (Quality Matters, 2018b). Course reviews result in better course design, which makes navigation less demanding for students, lessens boundaries to student accomplishment, and results in better outcomes (Quality Matters, 2018b). The eight general QM standards, the specific review standards under each of the general standards, and their respective point values are included in Appendix A. The eight standards for QM are as follows (Quality Matters, 2018):

**Standard 1: Course overview and introduction** - Clear instructions are provided on how to start in the course and locate components vital to the course.

**Standard 2: Learning objectives** - Learning objectives are the measure of the viability of a learning platform

**Standard 3: Assessment and measurement** - The assessments given in the course directly align and with the learning objectives.

**Standard 4: Instructional materials** - The materials used in the course aide the students towards accomplishing the learning objectives.

**Standard 5: Learning activities and learner interaction** - The activities in the course aide students towards accomplishing learning objectives.

**Standard 6: Course technology** - Tools utilized in the course aide in accomplishing learning objectives.

**Standard 7: Learner support** - Information that is listed in the course to assist students with technical support.

**Standard 8: Accessibility and usability** - The course applies best practices for accessibility and course navigation facilitates ease of use. (p. 1)

### **Student Feedback and Perception**

The last consideration in evaluation of distance learning to be reviewed in the literature is student feedback and perception. In an educational environment, fulfillment of students is characterized as the student's view or perception of the significance of their educational experience in an educational environment (Astin, 1993). According to Bolliger and Halupa (2011), student fulfillment is a significant issue in online learning and should be considered in the assessment of the course and program adequacy. Student

course evaluations collect those student perceptions, for the quality of the content in the course, in addition to the adequacy of instruction (Shattuck, 2014). These evaluations are particularly useful to more readily comprehend students' experiences in online courses, which, despite rapid growth, are still moderately new for most professors and students (Lowenthal, Bauer, & Chen, 2015). Examining student perception of online learning, based on the instructor's course design and development strategies, can contribute to the success and effectiveness of the course (Martin et. al, 2018).

Student perception evaluations of instruction provide an abundance of data about student experiences in higher education (Lowenthal, Bauer, & Chen, 2015). A study conducted by Gaston & Lynch (2019) evaluated whether using QM would better engage nursing students. The data gathered revealed that students enrolled in QM designed courses had more learning assessments that correlated with learning objectives compared to non-QM courses (Gaston & Lynch, 2019). A recent study done by Bolliger and Martin (2018) showed that students viewed courses that were engaging as very important. Lee, Srinivasan, Trail, Lewis, and Lopez (2011) conducted a study gathering information from students from at a higher education institution investigating perceptions of student support and fulfillment in their online coursework. Moreover, Lee et al. (2011) emphasized the significance of these institutions giving instructional help for online tools such as discussion boards to accomplish successful collaboration. In another study on student perception, Bolliger and Halupa (2011) found student satisfaction of online doctoral students is not well documented or recorded. Overall, the impact of student satisfaction is very important, as it can have an effect on motivation, interaction, learning process, performance, and success (Sahin & Shelly, 2008).

## Summary

In this chapter, a review of the literature discussed the history of online learning as well as the importance of quality and measurements of quality in online learning. A variety of studies were examined, focusing on quality assurance of online learning in higher education. Quality Matters (QM), a set of standards measuring quality in online course design, was discussed in detail. Utilizing these national standards will serve as a guide to ensure the validity of the study.

Finally, the impacts of student perception and fulfillment were considered. Research conducted by Kang and Im (2013) revealed that instructor presence, in student perception of learner–instructor interaction, could be a significant indicator of student perception of fulfillment in an online learning environment (Wei, Peng, & Chou, 2015). Further research concluded that online courses that were developed and designed well align with meeting the learning objectives, engagement between students and the content is amplified, decline in student questions about course expectations, and higher student fulfillment (Alizadeh, Mehran, Koguchi, & Takemura, 2019). The focus for this study will be student perception, and whether those perceptions align with the specific standards of the QM rubric.

In Chapter III, the methodology is presented. In Chapter IV, the findings are presented. A summary of the study, conclusions, implications for practice, and recommendations for further studies are discussed in Chapter V.

## **CHAPTER III**

### **Methodology**

#### **Introduction**

The purpose of this qualitative study was to analyze doctoral online students' perceptions of doctoral online learning to ascertain if student views aligned with the Quality Matters (QM) standards. A qualitative research approach was chosen because it allowed for the examination and analyzing the personal experiences of these online doctoral students. Being able to conduct a qualitative method enables to have a better understanding of what is thought about adult online learners towards quality assurance in their online courses. With the presence of the Quality Matters (QM) standards, the data obtained has the chance to contribute towards the course design and development process, in addition to supporting student success. This Chapter covers the purpose of the study, research questions, research design, selection of participants, instruments, procedures, and data analysis. This research adds to the depth of the research previously conducted on student perception by examination of the perception of the eight online doctoral students.

#### **Purpose of the Study and Research Questions**

Applying the use of the QM rubric has transformed the online classroom culture. Quality Matters (QM) is “a comprehensive external peer review designed to ensure quality in online courses (Swan, 2014, p. 87). It incorporates an evaluation rubric of institutional commitment, courses, curricula, instruction, assessment practices, student support, faculty support, and program assessment practices (Shattuck, 2014). This rubric was developed in 2003 as a part of a Fund for the Improvement of Postsecondary

Education (FIPSE) grant that was awarded to MarylandOnline (Tobin, Mandernach, & Taylor, 2015). The purpose of this qualitative study is to analyze student perceptions of doctoral online learning and to ascertain if student views aligned with the Quality Matters (QM) standards. Perception, the manner by which something is respected or comprehended, has for quite some time been a concern of online instructors (Simonson & Seepersaud, 2019). Interviews from this study will be used to shed light from the student's voice and give insight of a QM designed course. It was by and large however thought that online learning was by one way or another less viable, less dependable, and less important than traditional face-to-face education (Tallent-Runnels et al., 2006). In this manner, studies of student fulfillment in online courses varied in early online learning research; all the more as of late, fulfillment research has developed from general perceptions of online learning to more focused on research about particular courses and methodologies (Simonson & Seepersaud, 2019). With this qualitative approach, the research will address the following:

- 4) RQ1: What are students' perceptions of online course quality aligned on the QM rubric?
- 5) RQ2: Is there a relationship present between the online course design and the student's perception of the online course quality?
- 6) RQ3: Does the age of online doctoral students impact their learning as compared to the QM standards?
- 7) RQ4: Does the student's experience of online learning impact their learning as compared to the QM standards?

## **Research Design**

To address these research questions, a qualitative approach was applied. This approach allowed the participants to express their experiences with QM and if it has had an impact on their learning process. The QM rubric is put in place to create an environment that intertwines the instructor, student, and content to immerse themselves in online learning. The reason for this type of study is to examine the eight general standards of the QM rubric and student perceptions of the quality of their online courses. Those standards include course overview and introduction, learning objectives, assessment and measurement, instructional materials, learning activities and learner interaction, course technology, learner support, and accessibility and usability. Each of those eight general standards have specific review standards that are used to review the course.

Phase 1 consisted of an online survey containing 13 quality assurance questions. Permission was granted to allow the students to complete the survey. The survey was emailed to all 80 students using the encrypted email service Proton Mail. 30 students participated in the quality assurance survey. Thirteen of the students chose to participate in the interview process and filled out a demographics survey. This demographics survey was developed and administered in the student's online course for purposes of ease of use. After examining the responses of the students purposeful sampling took place. Seven female participants and one male participant were selected for purposeful sampling. These surveys were created in Qualtrics. After collecting all of the survey responses, the data was compiled, transcribed, and analyzed. Purposeful sampling was determined to choose the eight students.

The program that used for this study is a fully online program at this university. It is a graduate doctoral of education program. Every semester (spring, summer, and fall) there are several courses that run from the carousel.

After examining and analyzing the survey, the study moved into Phase II. For the purpose of this study only those students who had completed at least 12 hours of online doctoral work and had experience with the online learning platform were included in the study. Interview questions were asked to collect data from the students based on their perception of quality assurance in accordance with the QM rubric. The QM Rubrics have been developed and are regularly updated through a rigorous process that examines relevant research, data, and practitioner perspectives. They consist of standards supported by detailed annotations explaining the application of the standards and are intended to support the continuous improvement of courses with constructive feedback provided by trained and certified peer reviewers using a specific review protocol. This research includes an adapted form of the Standards from the QM Rubric for interviews with doctoral students regarding a course or courses that have met QM Standards in an internal, informal review and are not officially QM-certified (Adaption of the Standards from the Quality Matters Higher Education Rubric, Sixth Edition). The eight students were contacted via email and invited to participate in the interview process. The interviews were conducted virtually with the use of the video conferencing tool Zoom. Due to the nature of this program being online all of the interviews had to take place virtually. With the student's permission the interviews were recorded. During the interview the students were asked a series of questions (see Appendix E) related to the eight general standards of the QM rubric. One reason for holding interviews is to retrieve

a more thorough comprehension of their perceptions of quality assurance of their online learning. Their responses gave the opportunity to gather data and give a first-hand account of their experience with online learning.

### **Selection of Participants**

The selection of the participants for this study were students in a higher education state institution in southeast Texas enrolled full time in online doctoral courses. Convenience and purposeful sampling was used to determine the students for the study. There were approximately 80 students who were sent the survey. An email was sent to the dean of the Department of the Education along with the faculty of the online course requesting permission to send out the survey via email. All of the students were graduate doctoral students from the Department of Education.

Participants were informed that participation in the study was voluntary and had no bearing on the grade received in the course. This was strictly a voluntarily survey.

All 80 students would have needed to have complete at least 12 hours of online coursework in the Department of Education. After examining and analyzing the responses of the survey a sample of eight students was purposefully chosen: seven female and one male. When utilizing an ordinary purposeful sampling procedure, you need to “feature what is commonplace, typical, and normal” (Patton, 2015, p.268).

**Sampling Frame of Participants.** IRB approval was obtained from both the host university and Sam Houston State University’s IRB offices The

Department of Education doctoral professor will also be contacted who will assist with the identifying the participants of this study. Having the professor work on this study contributed to the creditability of this study. The Phase I survey/demographic information will narrow the selection of the participants.

### **Selection Criterion**

A purposeful sampling procedure was administered to choose the participants for this study that has a presence of online learning. Patton (2015) believed that the rationale and intensity of qualitative purposeful sampling derives from the accentuation on in-depth comprehension of certain cases. The study was delimited to doctoral students who were enrolled in an online course during the spring 2020 semester. The study was also delimited to adult learners, being of 25 years of age or older whom completed the online course during the spring 2020 semester.

### **Instrumentation**

There are three instruments that were used in this study. The first instrument is the 6<sup>th</sup> edition of the MarylandandOnline QM Rubric (Quality Matters, 2018) (See Appendix A). The basis of this rubric is comprised of eight general standards that are used to review and grade the quality of the online courses. Those standards are as follows: Course Overview and Introduction, Learning Objectives (Competencies), Assessment and Measurement, Instructional Materials, Learning Activities and Learner Interaction, Course Technology, Learner Support, and Accessibility and Usability. These standards are comprised of 42 standards which are designated by points in accordance to a relative value of important (1), very important (2), and essential (3). All essential standards have to be met in order to pass a QM course. 23 standards are essential, twelve are very

important, and 7 are important. It is a requirement that each online course that goes through the course development process has to pass QM. A certified QM reviewer reviews the course before it goes live to the students.

The second instrument was a quality assurance survey used to gather background information of the participants for the study in addition to how they rate the quality of their online courses (See Appendix C). The survey was created using Qualtrics and required of the students to fill out if they wanted to participate in the study. The survey consisted of 13 questions. These questions included the following topics: gender, state, generation, employment status, ethnicity, relationship status, comfort level of online program, reason for enrolling in program, taken online courses previously, hours completed in program, have a disability, and how they rank the level of quality assurance.

A second survey was administered to the participants who chose to participate in the interview (See Appendix D). This survey was also created using Qualtrics. The survey consisted of 9 questions. These questions included the following topics: name, email address, gender, state, generation, employment status, ethnicity, and relationship status.

The third instrument is the interview questions (See Appendix E). Semi-structured interviews were conducted with the online doctoral students from the Southeast Texas university who chose to participate in this study. The audio from interviews were recorded using the virtual tool Zoom. The interviews lasted between 15-35 minutes in length.

A follow up with the participants took place via email after all of the data was transcribed, analyzed, and detailed. The email consisted of data from the survey along with a summary of all the student's responses.

### **Data Collection Procedures**

Adult education doctoral students were the target audience for this study, with the mindset that this demographic would provide the most relative data to the study. Johnson and Christensen (2004) identify purposeful sampling as a type of nonrandom sampling that indicates the qualities of the number of participants of interest and after that finds people who have those attributes. All eight of the interviews were completed using the virtual tool Zoom.

### **Demographic Data Analysis**

With this study focusing on the adult learners' feedback and perception towards online learning, their observations are at the center of the data. The first part of data was collected from a survey about the demographics of the participants. It is important to retrieve data that derives from a fair representation of the participants in the online course. Hughes, Camden, and Yangchen (2016) argue that having surveys in place is imperative for moral and professional reasons and furthermore for research integrity reasons portraying tests for the purpose behind clarity, which impacts speculation of discoveries and possible replication of discoveries. This survey was given to the participants at the beginning of the study. 30 students completed the survey through Qualtrics. A report was processed via Qualtrics that displays the results of all of the survey questions. This report not only displayed the results but graphs displaying the breakdown of the responses for each question as well. 15 of the participants agreed to be

interviewed by filling out the demographics survey. After analyzing the results and graphs seven female participants and one male participant was purposefully chosen to be interviewed. All of the participants took at least 12 hours of online doctoral courses and are 25 years and older.

**Interview Data Analysis.** deMarrais and Lapan (2004) defines a research interview as “a procedure in which a researcher and participant take part in a discussion that centers around questions related to a research study” (p. 55). The participants were asked a series of questions that are in accordance to the QM rubric standards. These questions were designed as open-ended questions to provide the students the opportunity to give detailed responses about their experience with online learning. With the presence of interviews being conducted, other questions arose as the conversation is occurring. According to Merriam and Tisdell (2016), most studies by researchers can join every one of the three types of interviews (structured, semi-structured, and unstructured) with the goal that some institutionalized data is acquired, a portion of similar open-ended questions are asked of all participants, and some time is spent in an unstructured mode so new experiences and new data can develop. Applying this method supported the validity of the study by asking all participants the same questions, while also asking relevant questions that were not predetermined. These interviews took place through the virtual tool Zoom. All interviews were recorded and transcribed by Rev, a transcription company. After the participants responses were transcribed, the data was compared to the QM rubric for purposes of seeing if there is a relationship present or if there was disagreement with the rubric.

Implementing horizontalization was the first step completed allowing for statements that referred to the phenomenon being examined (Eddles-Hirsh, 2015). The second and final step consisted of reduction identifying the invariant horizons to form the core themes of the participants (Eddles-Hirsh, 2015).

To address research question 3, “Does the age of online doctoral students impact their learning as compared to the QM standards? will be addressed by the response of the survey question pertaining to the generation the students fall under.

### **Summary**

In this chapter, the methodology of the study was presented that detailed the design of the study and what tools were used to analyzed the data. With applying a qualitative research approach, there is a need to have an important way to extract data. In this study the data was collected using three instruments: MarylandOnline QM Rubric, survey, and interview questions. With the implementation of both a survey and conducting interviews, the data helped comprehend the participants perception towards online learning. Participants were selected and interviewed to obtain information in regards to determining student perception towards quality assurance. Questions from both of these tools were designed to cover all aspects to support the validity and transferability of this study. Asking relevant questions is important to extracting meaningful data (Merriam & Tisdell, 2015).

In Chapter IV, the data from the study will be presented and themes will be explored. Chapter V will draw conclusion, implication for educational practice, future research, etc.

## **Chapter IV**

### **Results**

The purpose of this qualitative study was to analyze doctoral online students' perceptions of doctoral online learning to ascertain if student views aligned with the Quality Matters (QM) standards. The surveys and interviews that were conducted for this study were used to extrapolate and analyze the views from these online students of the implementation of the Quality Matters rubric to determine whether there was a level of quality assurance.

The following research questions were used to lead this study: 1: What are student perceptions of online course quality aligned on the Quality Matters (QM) rubric? 2: Is there a relationship present between online course design and student perceptions of online course quality? 3: Does the age of online doctoral students impact their perception of online course quality? 4: Does student experience with online learning impact their perceptions of online course quality?

#### **Participants Characteristics**

To analyze the student's perceptions of quality assurance of online learning, a demographics survey was sent to the participants to gather information about their background. Every participant enrolled in the online summer course was given the same fourteen questions. Afterwards, a semi-structured interview was conducted, asking open-ended questions that would allow for deeper and meaningful responses. These interviews were recorded using the remote conferencing tool Zoom. All interviews were transcribed using the audio and video caption service REV. After all interviews were recorded, the videos were submitted to REV.

A total of eight doctorate of education students were interviewed. Of the thirteen participants who volunteered to be interviewed, two of them did not meet the delimitations to be eligible to participate. An additional three participants did not respond. There were seven female participants and one male participant remaining. Table 8 below displays the demographic information of all eight participants who participated in this study. Gender, ethnicity, generation, and employment status are represented.

Table 8. *Demographic Information of Participants*

Participant	Gender	Ethnicity	Generation	Employment Status
1	F	White	Baby Boomers (Born 1946-1964)	Employed, working 40 or more hours
2	F	Filipino	Millennials or Generation Y (Born 1977-1995)	Employed, working 40 or more hours
3	F	White	Generation X (Born 1965-1976)	Employed, working 40 or more hours
4	M	White	Generation X (Born 1965-1976)	Employed, working 40 or more hours
5	F	Black	Baby Boomers (Born 1946-1964)	Employed, working 40 or more hours
6	F	Black	Generation X (Born 1965-1976)	Employed, working 40 or more hours
7	F	White	Baby Boomers (Born 1946-1964)	Employed, working 40 or more hours
8	F	White	Millennials or Generation Y (Born 1977-1995)	Employed, working 40 or more hours

Participant one is an adjunct education professor at a community college and teaching pastor at a local church. She has been a teacher for 34 years.

Participant two is in K-12 education. She did not specify what course she teaches and how long they have been teaching.

Participant three is a math instructor at a 4-year university. She has been teaching for the past 18 years.

Participant four is an account executive for a software company. He has been in this profession for 20 years.

Participant five is a career and technical education health science teacher for a school district. She has been teaching for 8 years.

Participant six is a professor at a 4-year university. She has been a professor for 12 years. She has also served as an adjunct professor at various colleges and universities for the past 8 years.

Participant seven is an art/music elementary teacher. She has been teaching for 20 years.

Participant eight is a K-12 teacher at a local school district. She has been teaching for 19 years.

### **Interview Responses**

All interviews were completed in June 2020, using the virtual tool Zoom. A total of 14 questions were asked during the interview. Each participant was asked the same 14 questions. If the question asked was not understood, the researcher attempted to rephrase for clarity. After receiving the necessary data, the interviews concluded.

**Question 1.** Did the professor make clear what the purpose was for the course and what was expected of you?

Participant one stated, “I believe that they did, as much as my brain could understand what they were saying. I feel like until you've experienced it, until you have all the vocabulary, the jargon, all that kind of stuff and know ... it's almost like you have to know a little bit about quantitative in order to really understand what they're going to be asking you to do, but I recall feeling like, yes, I knew what was expected of me, what the class was going to be like, and how they were going to help me get there.”

Participant two reported that on the first day the professor covered everything and also where to start in the course. “The professor made sure during our first meeting that they covered everything, where to begin on the online course. They made sure that we are aware of what is the course for, what are the objectives or the goals, and what is the due date of every assignment. So every assignment detail and every goal for that assignment is being mentioned.”

Participants three and four were brief in their responses stating the professor made the purpose clear and what was expected of them.

Participant five spoke noted that the instructors has due dates. She went on to state, “The expectations for the course were made very clear through our learning management system via Blackboard. Each one of the instructors had a profile and the expectations for the course, as well as course calendars and due dates were also listed as well as any resources or books that we would need.”

Participant six expressed the importance of having a meeting at the beginning of the course. “Yes, both in the syllabus and also in the first meeting that we had. I think having the meetings the very first week was very important. And the details on the start here section, were very well done in that course.”

Participant seven was similar in her response to participant three, stating the purpose and the expectations of the course were clear.

Participant eight stated how the web meetings that occurred from the beginning of the course helped with the clarity. “Yes, they made it very clear. But from night one, when we first had our online web meetings, they made very clear what the purpose was. We were going to learn how to do quantitative methods, for those of us who wanted to do that when it gets time to do our dissertation.”

**Question 2.** Did the course and weekly learning objectives describe the outcomes expected of you? If so please provide an example. If not, what could have the professor done differently?

Participant one expressed concern towards all of the outcomes that were listed throughout the course. “As I recall, the learning outcomes were explained, yes, in each week. They seemed a little bit more ambitious, if that's a good word, or kind of scary. You're like, oh my gosh, that's a lot of stuff we're going to get done. How are we going to do all that? But then whenever....it seemed like a lot of content and a lot of work and a lot of learning outcomes, but the activities that were provided, there were maybe some twofers, like you do an activity and it actually covers several of the learning outcomes.”

Participant two said, “The assessments covered really what is needed to be learned in every module. One assessment is a through the questions, the questionnaires through Quizzes. The questions are really tackling all the topics that should have been read that we should have been reading with that specific week. Then on top of that, we have another assessment, which is the application of what we have read. I feel like the assessments are really aligned with the objectives.”

Participant three was again brief in her response stating that the learning objectives did describe what was expected of her. However, she did not provide an example of this.

Participant four spoke about the course design and organization. “I think they absolutely did. I mean, especially from a perspective and a course organization perspective, I think the learning objectives were on...yeah, it was like on every module.” However, the learning objectives were not paid attention to all the time but when she did read them they were clear. “Did I take the time to read them every week? No, because....I don't know. I was going to say, quite honestly, I feel like they put these in too many folders. But no, I think they were clearly stated and the activities met the learning objectives the vast majority of the time, if not all the time.”

Participant five detailed how the learning objectives were listed in the course. “Now, each one of the modules, sometimes they were broken down by the weeks. And so at the beginning we would have the module with the course objectives listed for each. And then if, when you clicked on the module in each week, they would also have the corresponding objectives listed. The objectives did meet and correspond with the readings that we were given either from the book or additional articles that they gave us.”

Participant six expressed concern on how the coronavirus impacted the achievement of the learning objectives. “I think the course objectives were good. The weekly objectives were there. I think sometimes they got confusing because ... Part of it was because COVID-19 hit in the midst of our class and a lot changed based on that. And then the course wasn't necessarily adjusted to the new expectations.”

Participant seven spoke on how the use of web conferencing helped her better comprehend the learning objectives. “Each week, so the objectives are listed and we had the assignments, the readings that we were supposed to do and then what assignments we were required to complete. And then they met with....on the weekly webcams, they went more into detail and they answered all of our questions.”

Participant eight noted that they did not look at the objectives. More specifically he stated, “To be honest, I never looked at those. I kind of liken it to our K-12, where most of the time it's written on the board because our principals require it of us. And so it's not really.....I'm no longer in the classroom, but when I was in the classroom, my kids would come in and say, "What are we doing today?" And I'd say math because that's what we did. But I'd point them to the board. Some of them got used to looking there to see, but if you're not instructed to look that direction, then do you ever read them? It's just on the board for the fun of it.”

**Question 3.** How did the assessments measure your progress according to the course’s level of mastery? Well or not well? If well, then in what way? If not well, where was the breakdown?

Participant one expressed a concern about the way in which the assessments in the course were graded in terms of the amount and timing of feedback that was provided. “Yet the changes that were made....I don't know if it was strictly a result of the pivot to the directive that all the instructors received to remember that we are all educators struggling with all this and to give us some more grace or leeway. I just feel like they set out with a good plan but they didn't execute it. Specifically, what I'm speaking about is learning the SPSS (Statistical Package for the Social Sciences) software, the activities

designed for us to learn them, to learn....I think there were maybe six research activities, five or six. The original plan and what was described in the modules seemed to be effective, like activity one and activity two, but then they stopped giving....or at least in my experience, my instructor of record. I went nine weeks and three days between getting any response or feedback from my professor at all on anything. I submitted four assignments in that time and got no feedback, and one of the things that I expect from an online program, especially at this level, is that I'm going to get feedback early enough in the week. If I get no feedback week after week after week, all I can assume is that what I'm doing must be correct. It is not okay....and I feel strongly about this. It is not okay to grade four or five assignments in a batch at the end of the semester and tell someone they were doing things wrong that you could have caught that several weeks ago and it would've made a huge difference in....what's that old adage, what you practice, you learn, and the longer I practice doing something incorrectly, because I'm basically teaching myself, the longer I practice something incorrectly, the better I get at doing it wrong.”

Participant two stated, “The assessments covered really what is needed to be learned in every module. One assessment is through the questions, the questionnaires through quizzes. The questions are really tackling all the topics that should have been read that we should have been reading with that specific week. Then on top of that, we have another assessment, which is the application of what we have read. I feel like the assessments are really aligned with the objectives.”

Participant three talked about how the coronavirus pandemic, lack of organization, hard grading, and a lack of clarity by the instructors had a big impact on the group project. “I thought it did. I mean, we were in a weird semester, because that was

the spring where the wheels fell off the bus. I will say that I think it was the first time that they had taught the course in the way that they taught it. And the professors were really disorganized, especially around the group project and stuff. And so the group project objectives were not terribly clear. I think we also had a bunch of whiny people in our course, so everybody was feeling really penalized and like, oh my gosh, I've never received a bad grade. And everybody was getting bad grades in the beginning because things weren't terribly clear, and it was the hardest course in the mix. So it's like stuff wasn't clear, they were grading real hard, and it just kind of threw everybody off.”

Participant five aligns the assessments in the course with how students are progressing in the course. “For me particularly, I think it was well. The readings it was....of course in a master's course and a doctorate degree, everything is more self-centered in your learning. So it helped in a sense of for the assessment being able to take the information that was read and applying directly to discussion questions and responding to peers in those discussion questions based on the information you read and also in reading other's discussion posts. It lets you see where you were. If you want to track, you can kind of figure it out. And then in the ratings that they send back, the reflection posts that you would submit as well as an assessment to the readings. So it helped me to grow too. For me, it helped me to make sure that I was actually understanding the information that I read because I wasn't able to apply it in written format.”

Participant six also felt that the coronavirus impacted the activities for SPSS. However, the participant noted the instructional videos provided in the course helped to support the learning process. “The activities for SPSS were phenomenal up until COVID

and then they changed them to just be more of an analysis of situations. When we were given the material....I'm looking at it from the perspective of the way the class started the first eight weeks or so, that the SPSS assignments were extremely....they were a huge learning opportunity because they gave us the videos....I'm very much a have to do it myself to figure it out. They gave us the videos to watch and walk through the assignments. And those were just invaluable in learning how to create, how to work through SPSS, to what we needed. And then the major project they designed, which we ended up doing the whole thing in our group because even....we were able to collect data and it walked us through the entire process. I thought that standard was fully met and that we were able to really learn what the objectives.”

Participant seven provided a positive response, stating that the learning objectives were aligned with the assessments. “For the quantitative, we were using the software to input our quantitative to use the software and to be able to implement and use it yourself with the understanding to get the knowledge of what....and being able to interpret what the data revealed. So I think the assessment was....I think it was aligned very well.”

Participant eight says, “What I liked about it and how I think it was well is if you didn't make a perfect score, you got a chance to re-assess. I felt like I was constantly learning and checking my understanding as I went. And the fact that we got multiple choice chances to take it, I think really helped. But it made sure that I was reading and understanding the things that the professor thought was important for me to learn.”

**Question 4.** What types of instructional materials were used (textbook, videos, etc.)? Also, explain how the instructional materials contributed to achieving the course learning objectives.

Participant one referred to the textbook, in addition to the videos supplied in the course. “I don't recall too many articles, but the textbook, the Creswell textbook was leaned on heavily, and we had some class meetings. There were videos that we watched, but one of the things that I remember thinking during some of those videos was I could look this up myself. I don't remember there being too many instructor created content, or for lack of a better phrase, expertly curated content, and in our class sessions, when one or more of my classmates, or even I would ask a question for clarification, more than one occasion, we were told, "Just Google it, there's a lot of good videos out there." The book was....it was really very, very heavy on the book, and I remember in the lectures there were always PowerPoints, which I printed all those out in advance. I looked at them, and then whenever they would have a class meeting, I had the slides ready and I would try to make notes about anything that they drew attention to.”

Perhaps participant two referred to several resources combined into folders. Participant two expressed “we use textbook, at the same time we have the uploaded articles, and also videos. Then there's also an additional PowerPoint presentation integrated in the learning. We have the assignment folder and then lecture folder. If there are videos in there, everything is embedded in that folder. Those are really helpful because you have to read the book and then it is supported by the PowerPoint. Which the PowerPoint's are actually kind of summarized form of the chapters that we have to read. Then the videos also are really helpful (Participant two).

Participant three also spoke about the videos and the web conferences with the professor. “There were videos. It actually hit so many different points, but it was a very good video lecture. We also had a meeting with the professors and they went over how

the course would work and what we were going to be doing because we also have a project that we're doing this semester that we're working on. And we had our textbook and we did have the videos and we also had the online meeting with the professors.”

The combination of videos, the textbook, and the discussions helped participant four understand the content in the course. Participant four said, “I mean, they used the textbook, videos, demonstrations. We also, I was going to say had to use, got to use SPSS. So, that helped. And I think we had a supplemental text, so we had two textbooks. Yes, Creswell and Salkind. I'd say they all contributed well; I mean the videos. They also told us to go and look at YouTube videos for some of the exercises within SPSS. But yeah, I think the Creswell sort of gave a detailed perspective of what we were going to be talking about. Salkind sort of put that into plain English and I thought he had good sort of flow around doing the exercises in SPSS. The simulation we were doing in SPSS really helped to make it real and sort of wrap your head around it so you go from conceptual to a better understanding, which wouldn't have been possible without the underlying framework of understanding what we were doing in the first place. And then the discussion in the class through the synchronous activity, I think was also good. Hearing how people don't understand things was very helpful, too.”

Participant five used a combination of videos, the textbook, and articles to better understand the material. “Yes, the videos were especially helpful to me. The articles were good, but I found the videos to be more helpful because they kind of explained in detail a little more than if you're reading an article and there's not much breakdown of the learning material, what they're actually teaching at the moment. So I found the videos as

well as the readings to be helpful. So I guess it's the combination of both, the videos, the books and the articles. I play the videos for myself.”

Videos and the textbook were the choices of materials for participant six to use in the course, however the participant took it a step further and purchased an additional book from the resources list. “The textbook we used....I don't know if it was an SPSS for dummies but it was essentially that. And then it also sent us the textbook and they presented it but it sent us to some help videos online. And actually, I ended up buying an additional book that was a suggested resource, that really helped me move through some of the assignments. I don't know if it was suggested in the syllabus or just in the class at some point when we were talking about it but it looks specifically at the scenarios that we were using to create our SPSS assignments and as a development for the major project.”

Participant seven utilized the textbook and videos. “It gave you an understanding and examples of what you were doing, why you were doing it. And then the SPSS let you actually complete a task.”

Participant eight used all of the resources of the course which included the textbook, videos, and the articles. The web conferences were also a resource that she felt was helpful. “I really felt like there were lots of resources. If you didn't really know the question or know the information, there was a lot of places where you could go look. Every time a new module was started, we had a web conference just to kind of discuss the expectations for it. I would also list the professors as resources.”

**Question 5.** Did you rely more on instructor supplied content (content the instructor made themselves) or content provided by a third party such as YouTube videos and/or the textbook. Which content helped more with meeting objectives?

Participant one felt that the third-party resources were utilized more than any of the instructor-supplied content. "I absolutely relied on third party content far more than instructor feedback or curated materials. As a matter of fact, we created a GroupMe way back in the beginning, last summer, and in the beginning we were just chatting about things like, "Where'd you get your book? What's the best place to buy it?" But in this particular class, I did a whole lot of teaching through GroupMe. I'd have people sending me private chats saying, "In the class meeting, you seemed to have a clue what's going on. Where'd you learn that? How did you know that?" And I would share the third-party sources that I had found that it helped me understand, and the Creswell text was hard."

Participant two used a combination of resources to access needed information. covered all basis of resources in the course whether it was provided by the professor or outside third-party resources. "It's a combination, I believe because I was reading all the content provided by the professor at the same time I was reading the book. But then of course I always seek for deeper understanding. It's just like the videos are going to show something that might not be written or that might not be shared by the professors. So I made sure I'm viewing everything just to make sure that I get all the concept that I needed. But again, the book itself will suffice."

A combination of all resources was also used by participant three. "It's really a combination of everything because I've read the chapters in the book. I've read these articles. I've watched the videos. So it really all combined together to make the point for this week."

Participant four had a specific breakdown of how much he used the resources in the course stating he used, "75% externally supplied and probably 25% of what they did.

I mean, the lectures and stuff helped, but there was probably five weeks, six weeks of that course where the lectures were more confusing. So I was just like, I'm just going to ignore all of that and go do something else.”

Participant five did outside research in addition to the YouTube videos from the course. “I'd have to say the YouTube videos that I kind of went and researched on my own to find, but of course this was done after reading the material, the further clarification of whatever it was that I was trying to understand at that time.”

Participant six relied completely on third party resources stating “because the system they used to create some of the assignments that let us...the data sets they used, originated from the textbook website. I couldn't have done it without the YouTube videos walking me through some of it.”

Participant seven stated that the modules that she was in dictated which resources were used. “Depending on the week...depending on which module we were in, I referred back to...in one of the modules, I referred back to the web conference, the information that was given to us in a web conference. I did use that along with the book. In the different modules I may have researched YouTube or, again, the Creswell book. If I'm rating overall, it will probably balance out. Some modules more than the web conference, some modules...all modules, the book. All modules I used the book.”

Participant eight relied heavily on the textbook in the course. “And so the textbook just really lining out the steps just really helped. I would go for the textbook.”

**Question 6.** What learning activities (group activities, discussion boards, assignments, etc.) were most beneficial to you in achieving the course learning objectives?

Participant one felt “the research activity assignments were the most beneficial, actually getting to examine datasets and to practice writing research questions, and I haven't mentioned the group project. I did give a lot of feedback during the course about the group project. Our group's instructor for the project and I understand that it was his first semester at doing that, I don't think that was a good experience for him either, because we continually asked him questions that he could not answer and it ended up showing in our final project. We had our variables transposed in the sentence, and like I said, while the project itself had a lot of value, just the way that it was executed, the lack of prompt feedback was a challenge. It felt like they thought we knew far more than we did. It was almost as if they thought we had done these things before and we hadn't, but the research activities, the individual week to week research activities related to learning the SPSS software, I found that those were very helpful in learning the outcomes for the course.”

Participant two stated the topic or lesson being discussed had a lot to do with whether it was beneficial or not. “The experimentation is just like the hands-on for SPSS is the one that I really loved. When we were talking about the quantitative in statistical treatments I love those because you can clearly see and apply using the SPSS, see the topic and apply the concept firsthand. Then another one that is so beneficial for me is when we worked in teams because I led the team. Within that team, within that group, we had the different parts and how you are really going to work with my dissertation in the future. So I felt like that one is really beneficial and I loved it. Even the leadership that I showed in the team that gave me a firsthand experience on how I will be dealing with my dissertation in the future.”

Participant three simply stated that there was a combination of everything that was beneficial to her.

The simulation activity and group project were the most beneficial for participant four. "I think the simulation activity, because I got that. I was like, "I know how to do this," and could figure it out. And then the group activity because I got to teach it. I got to explain it to somebody else, right? That's the other side of it."

Participant five responded "I loved that project even though you have to make the adjustments of getting to know your peers and some of their characteristics. But what I loved the most about those projects, it was very helpful because what we found was what one person may have been weak in, other was stronger. So the collaboration really to help to build all of us, to get the project done. So as well as the....as sometimes the peers will be able to explain a concept better to you because they may have had further background in that area. So I loved the group project. It was kind of bittersweet, but yes, it was very instrumental in the learning process."

The group project was also beneficial for participant six. "Well, we had a major group project and so we were forced into group activities. And my group, I was lucky that we were able to work well together and we scheduled a lot of what would be Zoom meetings. Now, the instructors created...the major project guideline that they created, allowed us to work together well because from the very beginning."

Similar to participants five and six, the group project was very beneficial for participant seven. "That gave me an understanding of what would be involved as the dissertation process comes to a completion for the research part of it. We discussed the different components of SPSS. I cannot even remember the correct vocabulary for the

different activities we had to do to decide which one would fit our project. I really believe they had everything for the course aligned.”

Participant eight differed from the consensus and stated the discussions with the students were the most beneficial along with the individual activities. “And my reason for that, I enjoyed...I guess being a math person, I really enjoyed the SPSS. I almost didn't like it at first because I can manipulate Excel very easily, but I understand that SPSS being the statistical side of it and it can do more things than Excel can. I was very sad that we no longer got to use the program and really learn the program. The group project was not so great for me. I know there were other groups who they did very well and worked very well together as a group, but that was just not resourceful for me at all.”

**Question 7.** Explain how your interactions with the instructor contributed to the course learning objectives.

Participant one had definite opinions about the professors in the course. “As I mentioned, professor one not really so much. After the stay at home thing, she became pretty much unreachable, but before that, I did send her a couple of emails that she answered and I might send six lines and she answers in six words, but for the most part, it was sufficient. The interactions with professor two helping with the course outcomes. I think professor two's contributions really did help....oh, and professor three. Professor three, when he would teach his class meetings, he only did it a couple of times, but when he contributed during the class, whether it was in the chat or he said something, it was gold. I mean it really was spot on it. I could hear it. He would say it in a way that was appropriate to our level of understanding and it would just....somebody else might say something in 150 words and he could say 10 and it made all the difference in the world.”

Participant two provides a perspective of professors that was helpful and others who were not so helpful. "Instructor two is the person that I always go to at the same time, if I had some concerns. So I'm kind of asking each of them, depending on my concern and they were all helpful. There were only times where I emailed that one of them and then that professor did not respond quickly, but other than that I think they were all helpful. If we have some concerns, they're always there to answer the question. Then, especially with the feedback. Instructor four, was the one who checked all my assignments. If I had some questions, he is always responding through the rubric. Well, that is the other side, the other one is that, "Professor four, why did I get this one? What is wrong with my work?" he would respond back with "Refer to the rubric?" Okay. So he kind of taught me how to always go back to the rubric and, "Stop asking me because I put everything in there." So I'm that kind of person, sometimes I'm so anxious because sometimes the rubric is not yet posted but then you're going to see the grade. So I will immediately email him but then at the end I got his style and it's just fine. It worked well."

Participant three states, "Professor two definitely helped us to get through that course successfully. As we went through the semester any questions that we had on just to clarify the material (were addressed)."

Participant four felt that the interactions he had with the professors had an open-door policy. "I had a good relationship in some of the one-on-one interactions that we had where I felt supported and that he was there for any questions and was very responsive and helpful. And so not at all the punitive experience that I think some of the other folks had. It was very much like, "Hey, sort of open door, you can come to me with any

question and we'll find a way out of it." So helpful from that perspective, from a one-on-one, which is encouraging and encouraged me to not know and ask. But then was also very much the same with our group project, sort of digging in with us and trying to help figure stuff out on that as well."

Participant five felt there was a lack of interaction and when there was, it was not very helpful. "I didn't do much interaction. The classes that we've had, the virtual classes that we have online through the Blackboard Adobe. Sometimes I feel like if we asked questions, they kind of just resorted us back to the book. Well, a lot of times we read it and we still were unclear. That's why we were posting the questions. So to me, I found it sometimes offensive to just say, "Go back and read Creswell," or if we did the project and they'll tell us... If we asked why points were deducted, they'd say, "Go back and reread Creswell." Okay, well, you're still not telling us particularly what the area is that we're not getting. So I didn't really... That interaction from them, I didn't really like. At times I can understand what they were saying, but after two or three times of us asking you the same question, it's obvious that we weren't getting it and then needed a little further direction."

Participant six felt that the interactions with the professors were helpful. "Those weekly meetings, sometimes they got long and sometimes the discussion to me, went off the rail with feeling like it needed to be a lecture when if they'd allowed us a little more question and answer time but in those meetings. As long as we had questions, we were able to voice them there. And also...now, one of the problems with the quant class, is they wanted us to learn it on our own." She felt she understood the underlining reason as to why the professors were pushing them to refer to the book. "I think a few of my

classmates had some trouble with that because they are still at the point where they wanted to be guided but they needed to be problem solvers. And so they would say, "Go look in the textbook." And that drove some of my classmates just batty but really, they were just trying to help us figure it out. After the fact, when we had gotten it done, they would come back and say, "Okay, this is how it needs to be." But they were just trying to get us to learn it from the beginning, which I thought was really helpful. Through the class meetings and then just asking questions, I think the interaction was good with professors."

Participant seven knew the reason as to why there were several professors in the course. "I did find the course was set up for that each person in the group would meet with the professor for the project. Each person was assigned a role at an appointed time. You would take the data, would present the data for your group project to the professor, the professor for the project. The professor for the course, what I find with the professors is that you were able to email them and get feedback from them in this course."

Participant eight had a positive experience with one of the professors in the course. "When my group members started slacking, I was able to contact professor three and he was able to walk me through a lot of the stuff that really I would rely on three other people for, and I didn't have that with them. And so he was just very, very beneficial through all of it. Professor three was my instructor of record. And there was an activity I had a couple of questions on, and I was able to email him and he gave me feedback in a timely manner. I know that some people say their instructors wait weeks to respond back or whatever, but I haven't had that experience."

**Questions 8.** Explain how your interactions with other students contributed to the course learning objectives?

Participant one expressed how beneficial it was when interacting with her cohort members. More so interacting with them outside of the class. “My interactions with my other cohort members really did help me to master the learning objectives. I think it helped all of us. We weren't quite the blind leading the blind, but maybe the partially sighted leading the blind in some instances. The student to student interactions, not the ones fostered by the class, but that we did on our own, definitely beneficial for mastering the learning outcomes.”

Participant two had a mixed experience with interacting with her peers. “The interaction is really important and the openness with the members because whether we like it or not we'll experience one of the members will be kind of...like in the family, there's always a black sheep. I really had a hard time getting in touch with her because she barely and rarely get in touch with us. But as the leader, I tried to find a way to get her involved. So communicating with the members is very important. Then we also had this GroupME chat, and this one is outside that group project. So we always communicate if we had some questions, we pose that question. The good thing is that everybody is always willing to jump in and help.”

Having interaction with cohort members helped participant three achieve the learning objectives. “We did have a group project as well for quantitative research and they definitely helped with the learning objectives as well, the interactions with my peers. So sometimes we would have to talk through the material and make sure that we all understood and that does help.”

Having communication amongst his peers helped participant four feel that they were all in this together. “Well, I guess on one hand, helped me not feel alone on the things that I didn't understand because they didn't understand a lot, but then also sort of being thoughtful about their approach or how they solved it or those types of things. Hearing how much time people were spending on things was sometimes scary and daunting, but also helped me sort of right size, like, "All right, you've spent an hour on this. You're not going to have mastery at that much. Maybe it's time to spend more time." But yeah, we talked in the course as well as outside the course, through external means as well as getting together on web conferences and talking that way as well.”

Participant five felt the interaction with her peers were helpful. “We kind of helped each other figure it out. It was very easy for us to discuss among each other, to vent. And when one of us were feeling frustrated about a concept, someone else could come in and say, "Hey, we got this." And kind of break it down or share some information that they may have found or a YouTube video. So they were always very encouraging. So I feel that the peer interaction was definitely a plus and has been from the beginning in this program.”

As with some of the other participants GroupMe helped during this doctoral program for participants six. “As a cohort, we have a GroupMe that we can ask each other questions on. I think that's very beneficial. And also, the nightly meetings. We were able to ask questions and we would interact through that process. Discussion boards are always helpful. I'm just a huge believer in discussion boards. And I feel like in the class, we're able to communicate in that way but really, it's the off the books scrutiny that really

allowed us to...I feel like I have some really good friends just from being able to interact in the GroupMe.”

Participant seven also used the communication tool GroupMe. “The discussion boards allowed us to interact. Interact so much as well that outside of the discussion posts, there was a collaboration when we had a GroupME collaboration for students in the cohort. So at least the one from [sic] the course discussion board, helped us build relationships that outside of the discussion board, we wanted to still collaborate outside of the course.”

Participant eight did not find the group project interactions effective. However, her cohort created a Facebook page and GroupME account which she found very effective. “Our cohort is really, really good with helping each other out and answering questions. We screenshot references all the time to each other to make sure we've got them formatted properly.”

**Question 9.** How well did the course technologies (video, web conferences, etc.) help you achieve the course learning objectives?

Participant one states for the most part that the technologies in the course were valuable. However, there was a lack of training utilizing the technology tools in the course. “The technology worked for the most part. I mean everything was accessible. The class meetings were accessible. I loved having the transcripts. I think what I learned is that if we didn't have someone...there's someone in our cohort who may be hearing impaired and frequently has the capture person that sits in. So we actually get a caption when they're participating. That's super helpful, but if they're not logged in or if they let the instructor know that they weren't going to be there, we didn't have the captions and I

missed it. So I know that's not a factor of technology that's inherent in this design, but it was something that we got to experience that I realized, 'Hey, that would be helpful to always have a caption when the instructors are speaking.'"

Despite the positive experience with the captioning, there were some issues with the other technology used. "I do want to mention that because one of the learning outcomes for this course was that we were going to work with a group and we were assigned to a group to do this big project, they turned on the group tools, all the instructors didn't know how to use the group tools. We didn't know how to use the group tools. We watched a lot of videos trying to figure out how to use the collaborate feature and sign in to the collaborate room. We tried a few times and we abandoned it. We just went to our personal Zoom accounts and using FaceTime with our phone. The group discussion board, the group information about posting things, that was not effective. I don't know if it was our ignorance, a lack of training, the features of the collaborate software, but that was not effective for us."

Participant two stated the use of web conferencing was helpful and essential. "So the (web) recordings are really helpful, even though I was absent during the live conferences, the live classes that we do. If I had some questions I needed to go back with those videos and listen. Because sometimes during the live conferences some of us are asking questions, "What bothers us." So the professors can actually answer our questions during those video conferences. So listening to the recordings is a very important."

Participant three felt the YouTube videos contributed to the research aspect for the course. "We had our SPSS YouTube videos that they provided for us. And then I also did some outside research on my own, looking up my own research, I mean my own

YouTube videos, but the technology that they provided us with helped me to find more resources.”

Participant four felt that without the technologies in the course, the work could not have been accomplished. “Well, I think really well because without it, I wouldn't have done well at all. But yeah, I mean, the LMS, SPSS, the videos within the course, the synchronous sessions, I think all of those contributed some part to my ability to get through the course.”

Participant five stated “at times it was a little difficult to navigate and that's a lot of resorting back to YouTube videos for that. Particularly that section (of SPSS).”

Participant expressed the fact that the course was equipped with technology that she could learn from and apply on her own. “I think all the resources that were provided in videos were really good for the quantitative class for just the sheer fact that when you're trying to learn a technology, it's easier to have someone show you what to do. And that might just be a learning preference but for me to go and look and go, "Okay, this is how you do it. Pause. Me do it. This is how you do it. Pause. Me do it.”

Participant seven stated the videos and web conferences “helped me achieve the learning objectives.”

Participant eight expressed that the web conferences and YouTube videos assisted with the learning process. “The web conferences that we did at the beginning of every module were great, just an introduction of what to expect over the next week or two or three, depending on the module. The YouTube videos sometimes were very, very lengthy and I had a hard time sitting and watching them. But the ones that seemed to be about 15 to 20 minutes long were good, because I could sit and watch.”

**Question 10.** Do you have any suggestions for improvement in the course technologies?

Participant one had comments based on the approach to the course and how that incorporated the course technologies. “The way you've set this course up doesn't reflect that. It's still very kind of individualistic as to the outcomes. We're going to be assessed based on this product, producing this research study, but it's like you're trying to do two things. Either you want to teach us how to work in a group to do this and collaborate, or you want us to get it done and learn all the things about it,” and that was missing in there.”

Participant two did not have any suggestions towards improving the technologies. She did however have positive things to say about the technologies that were present in the course. “Everything ran smoothly from the assignments, and everything to video conferences, everything is clear. We did not experience any problem. Everything looks good.”

The same sentiment was shared with participant three as with participant two in terms of the course doing a very good job of providing technology. “I thought they did a very good job at providing us with what we needed. And I feel like we're doctoral students, we should be able to research on our own. So we should be able to take what they provide to us and then be able to go outside and say, “Okay, I'm also finding this research and these resources to help me.” So we I feel like they're providing us with the access or with the materials that we need in order to pull more information and to, trying to think of how I want to say this, but to learn everything that we needed to learn.”

Participant four had the most issues with the technology in the course. “Well, I’m trying to take off my Blackboard hat, but I was just like, “They could certainly update the interface because they’re behind.” Well, on not only the Blackboard Learn side, but the Adobe. I had trouble with Adobe pretty much every class meeting, and that was really frustrating to me. I couldn’t get my headset to work, like I’m wearing a headset now. I wore my headset in every web conference, every time I pulled up Adobe, it was like you were underwater. Every time. And I could finally get it to work a couple of times, but it was never predictable. I thought they did a good job overall.”

Participant five stated that “spending more time on SPSS” would be helpful.

Participant six felt that the videos could have been more aligned with the content. “I think that some of the videos provided could have been more specific to what we were working on. I had to go and find some of the videos myself. With each step that we were working on, if there would have been not just to go see this level of video, that weren’t as specific. I think some of the videos might have been chosen without fully looking at the content, just maybe looking at the title.”

No suggestions were made from participant seven.

Participant eight expressed that the lengths of the videos were too long. “I know that if it’s a YouTube and you have to post the whole thing for copyright, but even if they could direct us and say, “Start at 10 minutes and 23 seconds, and watch for 15 minutes.” In addition to the YouTube videos, the web conferences only needed to be per module and not weekly. “Just speaking of this class, we only met when a new module started. And so that was perfect, but some of the others were meeting weekly and I’m not finding as much benefit out of it because we haven’t done enough to need to meet again.”

**Question 11.** Do you feel your privacy was protected sufficiently when using course technologies?

There was a consensus from all participants that their privacy was never in question.

**Question 12.** Did you use technical support during the class? If so, for what problem and how was it helpful?

All participants did not contact technical support except participant four. He needed to reset his password for Blackboard.

**Questions 13.** If you used student services, how helpful were they? If so what services did you use and was it helpful?

The library was used by all participants from the study.

Participant one did use the university library but expressed that it was difficult to navigate. “It takes too many steps. It is not just one click. Yeah, that was really hard.”

Participant two, however, had a different experience with the university library. “Every time I searched for articles and I couldn't find the article that is frequent on my case. Because I really wanted to read that article and I couldn't find it, but it's there at the (university) library.”

**Question 14.** Were there any issues to establishing your need for accessibility tools and getting the support you need?

No participants noted having a disability, but all participants expressed that while viewing the videos they used the closed caption option.

Participant one stated “I did, because quite often I view the videos while I am in other settings. So if I had an eight minute video to watch, I might watch it while I am

sitting in the car waiting to pick my daughter up, and just having both the auditory and the visual with the captions just made it easier for my learning style to pick up both.”

Participant three said, “Because sometimes you can't hear the audio is not very loud and sometimes people have a very strong accent. And so sometimes you do need to, I just like to read along and make sure that I'm actually hearing it correctly.”

Participant four used the closed caption “on a couple of them because I felt like reading and seeing the information would reinforce what I was hearing and also eliminated any sort of ambiguity and also keep me paying attention to it.”

The same use of captioning was expressed by participant five sharing that “a few of them I did because sometimes the dialect was a little difficult to understand just from some of the presenters from the videos. So I would play that back at times. And also, I use closed caption just for me hearing and also seeing the words helped me better comprehend, so sometimes I can go back and read it myself. So I would use closed captions a lot on those videos.”

Participant eight said, “Because they're walking through (the content) and I get distracted by them so I miss what's said, because I'm listening to him but I'm still reading what's going on in the video.”

### **Emerging Themes**

The heart of qualitative analysis is the mission of uncovering themes (Ryan & Bernard, 2000). Referring to the transcripts from the interviews, a cluster analysis was implemented to determine those emerging themes from the experience of the participants. The first step taken was horizontalization allowing for statements that referred to the phenomenon being examined (Eddles-Hirsh, 2015). The second and final step consisted

of reduction identifying the invariant horizons to form the core themes of the participants (Eddles-Hirsh, 2015). There were four themes that emerged from this study: attention to detail of course learning objectives, utilization of instructional materials, student-instructor interaction, and student-student interaction.

Table 9. *Emerging Themes*

Theme	Description	Significant Statement
Attention to detail of course learning objectives	Course objectives in the course contributed to the participants understanding of the content.	“they absolutely did. I mean especially from a prescriptive and a course organization perspective.”
Utilization of instructional materials	Materials in the course that had an impact on the participants learning process.	“really felt like there lots of resources. If you didn’t really know the question or know the information, there was a lot of places where you could go look.”
Student-instructor interaction	The relationship between the students and the instructor that is centered around communication.	“would say it in a way that was appropriate to our level of understanding.”
Student-student feedback interaction	The relationship between the students and that is centered around how they communicated with each other.	“we kind of helped each other figure it out. When one of us were feeling frustrated about a concept, someone else could come in and say ‘hey, we got this.’”

**Attention to detail of course learning objectives.** When online courses at this university go through the course revision process, one of the main points of emphasis is course/weekly learning objectives. With this particular course, the objectives were higher level thinking skills, being this was a doctoral course. The objectives were written in accordance with Bloom’s taxonomy. The learning objectives are an important component

in order to pass QM. Measurable course learning objectives accurately and clearly portray what students will understand and do if they complete the course (Quality Matters, 2018). If the objectives are not measurable and aligned with the assessments in the course it will not pass. Each specific review standard under the learning objectives general standard is worth three points. All three-point standards need to be met. In many ways this is an integral part of the course development and design process.

The question to the participants was about the course and weekly learning objectives and did they describe the outcomes expected of the student. This question reflected the importance of measurable objectives in the Quality Matters rubric. Participant one said “They seemed a little bit more ambitious, if that’s a good word, or kind of scary.” Participant four stated, “however, the learning objectives were not paid attention to all the time but when she did read them they were clear. “Did I take the time to read them every week? No, because...I don't know. I was going to say, quite honestly, I feel like they put these in too many folders.” Participant eight specified “To be honest, I never looked at those. I kind of liken it to our K-12, where most of the time it's written on the board because our principals require it of us. And so it's not really.....I'm no longer in the classroom, but when I was in the classroom, my kids would come in and say, "What are we doing today?" And I'd say math because that's what we did. But I'd point them to the board. Some of them got used to looking there to see, but if you're not instructed to look that direction, then do you ever read them? It's just on the board for the fun of it.” Despite this opposition from two of the participants not looking at the objectives, the majority expressed that the learning objectives described the outcomes expected of them.

Participant five says “the objectives did meet and correspond with the readings that we were given either from the book or additional articles that they gave us.”

**Utilization of instructional materials.** In order to complete the assessments in the course there needs to be a variety of instructional materials in the course. According to QM (2018) students are given a clarification of how the instructional materials and learning exercises are utilized in the course, and how each will assist them with accomplishing the learning objectives or assist them with planning to show course capabilities. My question to the participants was about the instructional materials that were used in the course. All participants agreed in terms of the importance of the materials that were in the course and how they helped achieve those learning objectives. Participant six noted, “I ended up buying an additional book that was a suggested resource, that really helped me move through some of the assignments.” Participant two added “if there are videos in there, everything is embedded in that folder. Those are really helpful because you have to read the book and then it is supported by the PowerPoint.” The textbook, videos, and PowerPoint proved to be instrumental in all of the participants learning process.

**Student-instructor interaction.** QM stresses the importance of having an online course that is both interactive and engaging. Active learning includes students connecting by accomplishing something, for example, finding, processing, or applying ideas and data (Quality Matters, 2018). The research question to the participants was to explain the interactions you had with the instructor(s) in the course. Participant three stated “discussions” and “weekly meetings” were the interactions she had with the instructor. Moreover, participant seven says “the professor for the course, what I find with the

professors is that you were able to email them and get feedback from them in this course.” However, there was some disdain expressed from a lack of interaction with the instructors. Participant one describes the interaction with her instructor one as “unreachable.” Participant five also had strong feelings towards their instructor as well in that when “we asked questions, they kind of just resorted us back to the book.” This particular course had several instructors who had different responsibilities and it resulted in mix reactions. Some felt that they received the necessary feedback from questions, whereas the others were not as helpful and had to refer to the textbook and videos for answers.

**Student-student feedback interaction.** As with student-instructor interaction, student-student interaction is equally as important when it comes to QM. This theme proved to be just that with all participants expressing positive feedback towards the interactions they had amongst their peers. This question was similar to the previous question about student-instructor interaction, but focused on student to student interaction. Participant four said, “they definitely helped with the learning objectives as well, the interactions with my peers. We would have to talk through the material and make sure that we all understood and that does help.” Participant seven said they “interact so much as well that outside of the discussion board, there was a collaboration when we had a GroupMe collaboration for students in the cohort that helped us build relationships.” Participant eight followed suit with uttering “our cohort is really, really good with helping each other out ad answering questions and screenshot references all the time to each other to make sure we've got them formatted properly.”

## **Summary**

In this chapter, data from the one-on-one semi-structured interviews was presented describing student perceptions of online course development. There was a total of eight doctoral students interviewed. The transcripts from the interviews were presented, in addition to the demographic information that was collected from the survey instrument Qualtrics. After the interviews were transcribed, I applied the horizontalization process and then gathering the invariant horizons to form the themes. Four themes that emerged from this study: attention to detail of course learning objectives, utilization of instructional materials, student-instructor interaction, and student-student interaction. The student's perception of the QM rubric overall was positive.

## **Chapter V**

### **Conclusions**

This study was conducted to determine student perception of online course quality in accordance with the Quality Matters standards. The study also examined if there were any connections between the age of the participant and their perception of the quality of the online course. In this chapter, a discussion of the conclusions and implications for this study are presented regarding the investigation of student perceptions of quality in fully online courses. Chapter V is divided into six sections: a brief summary of the purpose, summary of the procedure, findings, implications for future research, study limitations, and concluding remarks.

#### **Summary of the Purpose**

Over the last 10 years there has been tremendous growth with online learning giving people the chance to gain new skills by way of the internet (Koksal, 2020). This has become of more prevalent especially all that is going on in the world with COVID-19. The growth of online education was projected to grow even before the pandemic with forecasts showing that the online education market was to reach \$350 billion by the year 2025 (Koksal, 2020). With this estimation, quality assurance in online learning will be at the forefront.

To measure the quality assurance of online learning, Quality Matters (QM) developed a rubric to review standards of course design and development. These standards have been fully adopted by the university to be utilized by both instructional designers and the faculty. The university's goal is to have all of the online courses, undergraduate and graduate, pass QM before courses are published for the students. This

course design and development process has been in place for the past six years. However, during this time the university has not reached out to the students to get their perception of these QM courses. The combination of research needed towards quality assurance in online learning and the researcher's knowledge in instructional design prompted this study's execution. Retrieving this information from the students will contribute towards how course design and development will be approached.

The researcher attempted to determine if QM standards applied to the design and development of online courses were beneficial to the students learning process. The research was designed to answer the following questions:

- 1) What are student perceptions of online course quality aligned on the Quality Matters (QM) rubric?
- 2) What is the relationship present between online course design and student perceptions of online course quality?
- 3) How does the age of online doctoral students impact their perceptions of online course quality?

### **Summary of the Procedure**

Data for this study was collected from the initial screener, a quality assurance survey, that was completed by 30 participants. Questions from this survey consisted of rating of comfort level towards online learning, reasons for taking an online course, online course experience, number of online courses completed, and rating of quality assurance in their course(s). From the initial screener, fifteen of those participants agreed to be interviewed and filled out a demographics survey. Questions from this demographics survey consisted of their generation, number of work hours, ethnicity, and

relationship status. These surveys were created by the researcher to retrieve their perception of online learning along with their background. Of the fifteen participants that agreed to be interviewed, eight were purposefully chosen to participate in an interview. The QM instrument was utilized to determine their perception of quality assurance towards their online course. The interview questions were aligned with the standards of the QM rubric.

All of the participants in the study were involved in the education profession in some form or fashion whether it was K-12 or higher education. They were also enrolled full time in the online doctoral program. All potential participants were sent a secured email to partake in the study. 30 participants filled out the quality assurance survey. Fifteen participants chose to participate in the interview by filling out the demographics survey. All of the participants' identities, including those who filled out the quality assurance survey, the demographics survey, and who were interviewed, were all kept confidential.

The surveys for the study were created using the tool Qualtrics. The interviews conducted were used to address research question one whether the participants' perceptions of online course quality aligned with the QM rubric. The demographics survey was used in part to address research question two in addition to the interview responses if the age of the participants impacted their perception of online course quality.

### **Research Question Findings**

This study was intended to extrapolate student perception towards quality assurance of online learning. The following research questions were used to guide the study:

- 1) What are student perceptions of online course quality aligned on the Quality Matters (QM) rubric?
- 2) What is the relationship present between online course design and student perceptions of online course quality?
- 3) How does the age of online doctoral students impact their perceptions of online course quality?

Being that this university didn't have a plan in place to assess student perception of online learning, these questions will aide towards the way course design and development is performed going forward.

**Question One.** Research question one addressed the student's perception of online course quality and how it aligned with the QM rubric. The participants were asked fifteen questions which were in accordance with the eight specific standards of the QM rubric: course overview and introduction, learning objectives, assessment and measurement, instructional materials, learning activities and learner interaction, course technology, learner support, and accessibility and usability (Quality Matters, 2018).

In regards to the course overview and introduction all of the participants felt that the introduction to the course was done very well and made clear what the purpose of it was. This was important to reach a consensus from the participants mainly because explaining the purpose of a course gives a preview of how things will proceed.

Participants also noted that the course learning objectives are an integral part of online learning and QM requires that they be of high-level thinking skills and align with the assessments in the course. Online courses that are well designed contributes towards having learning objectives that relate to student fulfillment (Schlosser & Simonson,

2009). A majority of the participants stated that the learning objectives were describing what was expected of them. However, some participants did not view the objectives and went straight to the content and assessments in the course. Also, it is worth noting that this online course ran during the COVID-19 pandemic which resulted in course objectives being altered.

When it came to the assessments and measurement the participants felt that the assessments in the course aligned with the objectives in the course and were able to successfully complete them.

The instructional materials, according to the participants, also had an impact toward that achievement. Resources such as YouTube and the textbook were integral in their learning process. Another resource that they used was the online tool GroupMe. A majority of the participants expressed that having the ability to confer with one another about the course was essential. These results directly align with Young's (2006) findings in that proposes that students see an efficient online instructor as one who is effectively involved, gives constructive feedback to students, adjusts to their needs, and urges them to interact with their cohorts, their instructor, and the course material. However, there was some criticisms indicated by the participants with a lack of instructor support.

Participants felt that the learner activities and learner interaction was integral to their learning process. According to Jaggars and Xu (2016) virtually all online quality frameworks stressed how vital communicating interpersonally is. Many participants stated that when they had questions about the content, the instructors responded with read the textbook and watch the videos to understand it. With that they relied heavily on the instructional materials in the course which they found to be very beneficial. These

findings are consistent with those of Jaggar & Xu (2016) who stated that most online course quality rubrics feature the significance of plainly expressed and all-around adjusted learning objectives, between course objectives and assessments, and clear and straightforward evaluating standards.

Course technology played an important role according to the participants. The QM rubric indicates that technologies in an online course ought to be current and that students ought to have prepared access to those required technologies (Quality Matters, 2018). Technology such as videos, SPSS software, and Powerpoints were available in the participants online course and all detailed that they helped tremendously towards the assessments in the course. Ralston-Berg (2011) conducted a study that determined that two of the top choices amongst online students were linked to technology that can be easily downloaded and ease of accessing material. The participants felt that without these technologies they would not have understood the content in the course. By having these resources in the course, the participants did not have any recommendations for changing any of the technology in the course.

When it came to learner support none of the participants used any of the resources. The resources were listed in the syllabus as well as the resources folder in the course. Those resources included information for both academic support and technical support.

Lastly, on the subject of accessibility and usability the participants used features despite not having any disabilities. With the videos in particular the participants were asked if they used the closed caption feature on them and all of them responded they did. This was somewhat of a surprise being that none of them had a disability. They

welcomed the close caption because it helped them better understand what was being conveyed to them. This was especially helpful when viewing videos that were about SPSS.

**Question Two.** The second question looked to seek whether there was a relationship present between online course design and student perceptions of online course quality. The design of a course dictates how QM was implemented at this institution in 2013 and over the course of seven years no data was collected from the students to see if it was satisfactory. During this timeframe these online courses went through revisions in accordance to the QM rubric. The design of them was done from a student's perspective. The challenge was to make sure the content of the course was maintained while all eight standards of the QM rubric was implemented. Being that this was the first time the institution received feedback of the student's perception of a QM designed course, it resulted in a positive review. QM emphasizes two important aspects of the rubric: high level of interaction and engagement in the course and making sure the course is accessible.

The successes of the participants were having several resources available for them to access when it came to interaction and engagement. What was striking though was discovering that the participants took it upon themselves to be in charge of their learning process. Combined with the resources in the course such as the videos and the GroupMe conversations, they also searched for other resources that were not recommended or required for the course. Several of the participants expanded their research by finding more readings and videos to better comprehend the content in the course.

Online courses are successful and bolster both student-instructor collaboration in addition to student-student connection in methods that permit them to build information and figure out how to plan forms for learning new material (Schell & Janicki, 2013). Of all the questions asked to the participants they expressed how important it was that they interacted with not only their peers but the instructors as well. Ralston-Berg (2011) conducted a survey that found that student-student and student-instructor interactions are vital to online learning. On the contrary, it has been studied most recently that investigating the presence of communication and collaboration is not adequate for online learning (Jaggars & Xu, 2016). The mere presence of tools that aide in communication and collaboration however did help the participants in their course. Without those resources being there the success rate would have dropped. According to Grandzol and Grandzol (2006), having a structure that is clear and has directions that show students how to navigate the course knowing where to go and what needs to be done contributes to their success.

In regards to the accessibility in the course it is imperative that the instructor have all the website links alt-texted, all images in Powerpoints have alt-text, and all videos in the course be have closed captioned. All of these needed to be completed just in case there were students with disabilities. What was surprising is despite all the participants stating they did not have any disabilities they still used the closed-captioned feature when it came to viewing the videos.

**Question Three.** Research question three asks when it comes to age is there a determination amongst different generations when it comes to student perception online learning. Within the participants there were three baby boomers (born between 1946 and

1964), three generation X (born between 1965 and 1980), and two millennials (born after 1980). After looking at the data of their interviews, the conclusion arrived at no definitive differences amongst the three generations. Age did not play a factor towards how they perceived online learning. A study conducted by Ke and Xie (2009) concluded that differences in age amongst adult learners is not a predictor of their satisfaction or how well they do in the course.

Perceptions across the board from all participants stressed the significance of student-instructor, student-student, and student-content interaction. Brown (2005) says,

“Including verbiage such as analyze, create, present, and classify should be present supporting the students on what they need to do....they should also receive access to materials that are separate from the class helping towards examining the data or forms of media. Having discussions both in person and virtual are imperative towards learning. p. 12.7-8).”

An extension to the age of the online learners that was discovered was gender. Of the eight participants, seven of them were female. This could be looked upon as motivation amongst them. According to Yoo and Huang (2013) students in their twenties, thirties, and forties revealed a more elevated level of significance in the present moment and long-haul motivation than the remainder of the age groups.

### **Implications of the Research**

There are several implications from this research. The results of this study could be used to help in the design and development of future online courses. Being that this university did not have a plan in place to assess student perception of online learning, these questions will aide towards the way course design and development is performed

going forward. The suggestions are beneficial for not only the institution but for the instructional designers and faculty as well. All stakeholders can find positivity from the suggestions made by the participants. Getting more students to participate both undergrad and graduate in the assessments of their experience with their online courses can put the university in the position to have more high-quality online courses.

The research could also impact the continuation of using the QM rubric. Being that these doctoral students gave a positive outlook on their online courses, other graduate and even undergraduate students may not feel the same way. This could negatively impact the use of QM going forward. Not only would this institution stop using the rubric but other institutions may stop using it as well.

The research could also be used towards the institution developing its own online course rubric to replace the QM rubric. This could ensure that not only will the university maintain the quality of reviewing the courses for quality, but save money utilizing its own rubric.

Combined with the probability of assessing the online courses with a new rubric to replace the QM rubric, there could be new protocols put in place such as putting more emphasis towards having more student-instructor interaction. In the opening meeting with the instructors there will be discussions about developing their course in accordance to future student reviews. Data will be shared with the faculty informing them of what the student body has expressed.

### **Future Research**

After utilizing the QM rubric for online learning since 2013 data was collected from students to see if quality assurance was present. Now that data has been collected

from these doctoral students, future research can be conducted on undergraduate and graduate students. There were eight participants who were interviewed. Future studies should gather data from a larger data set to improve the validity of the study.

With conducting a qualitative research on student perception of quality assurance in online learning, it would be interesting to see future research examining faculty perception of the QM rubric to determine if they perceive it to be positive. Also, with everything going on with the Covid-19 pandemic seeing how students adapt to online learning and the quality of it for not just higher education students but with K-12 students as well. Perhaps this could lead to K-12 school districts adopting the QM rubric for their online courses. In a future study perhaps, the researcher will not have a background in instructional design to provide a different perspective towards quality assurance in online learning. Future studies could also examine other rubrics that measure quality of online learning. Possibly those other studies can look to see if those are just as relevant as the QM rubric.

## **Conclusion**

To seek if quality assurance is present amongst online learning in accordance with the QM rubric, eight participants were interviewed to examine their perception of said quality assurance. This study discovered the most vital components that students feel are fundamental to their learning process. Overall, these doctoral education online students collectively thought that their spring 2020 online course was designed and developed with high quality. They conferred their thoughts about the importance of detail with course learning objectives, the use and access of instructional materials in the course, and

having that relationship with their fellow students and the instructors in the course establishing a high level of communication.

There is a huge increase in online learning with the current coronavirus pandemic. It is vital that instruction that is provided by the schools meet high standards. More schools, both higher education and K-12, will be utilizing some form of remote learning this year and that same quality in the classroom will need to be preserved online. With QM implemented it has the potential to serve as an ally for other institutions as it has done for the university in this study ensuring a high quality designed online course. It is worth noting that this institution began using Quality Matters since 2013 and there has been no data collected as to how this rubric has fared with the students. Being able to take what was learned from this study and apply it towards future course developments courses will serve not only the students but the faculty as well. This also opens the opportunity to look at the analytics from the LMS to see if the students perceptions align with their activity in the course.

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## APPENDIX A

## Quality Matters Rubric

<div> <div>HE</div> <div>Specific Review Standards from the QM Higher Education Rubric, Sixth Edition</div> </div>		
General Standards	Specific Review Standards	Points
Course Overview and Introduction	1.1 Instructions make clear how to get started and where to find various course components.	3
	1.2 Learners are introduced to the purpose and structure of the course.	3
	1.3 Communication expectations for online discussions, email, and other forms of interaction are clearly stated.	2
	1.4 Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.	2
	1.5 Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.	2
	1.6 Computer skills and digital information literacy skills expected of the learner are clearly stated.	1
	1.7 Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.	1
	1.8 The self-introduction by the instructor is professional and is available online.	1
	1.9 Learners are asked to introduce themselves to the class.	1
Learning Objectives (Competencies)	2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.	3
	2.2 The module/unit-level learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	3
	2.3 Learning objectives or competencies are stated clearly, are written from the learner's perspective, and are prominently located in the course.	3
	2.4 The relationship between learning objectives or competencies and learning activities is clearly stated.	3
	2.5 The learning objectives or competencies are suited to the level of the course.	3
Assessment and Measurement	3.1 The assessments measure the achievement of the stated learning objectives or competencies.	3
	3.2 The course grading policy is stated clearly at the beginning of the course.	3
	3.3 Specific and descriptive criteria are provided for the evaluation of learners' work, and their connection to the course grading policy is clearly explained.	3
	3.4 The assessments used are sequenced, varied, and suited to the level of the course.	2
	3.5 The course provides learners with multiple opportunities to track their learning progress with timely feedback.	2
Instructional Materials	4.1 The instructional materials contribute to the achievement of the stated learning objectives or competencies.	3
	4.2 The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.	3
	4.3 The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials.	2
	4.4 The instructional materials represent up-to-date theory and practice in the discipline.	2
	4.5 A variety of instructional materials is used in the course.	2
Learning Activities and Learner Interaction	5.1 The learning activities promote the achievement of the stated learning objectives or competencies.	3
	5.2 Learning activities provide opportunities for interaction that support active learning.	3
	5.3 The instructor's plan for interacting with learners during the course is clearly stated.	3
	5.4 The requirements for learner interaction are clearly stated.	2
Course Technology	6.1 The tools used in the course support the learning objectives or competencies.	3
	6.2 Course tools promote learner engagement and active learning.	3
	6.3 A variety of technology is used in the course.	1
	6.4 The course provides learners with information on protecting their data and privacy.	1
Learner Support	7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.	3
	7.2 Course instructions articulate or link to the institution's accessibility policies and services.	3
	7.3 Course instructions articulate or link to the institution's academic support services and resources that can help learners succeed in the course.	3
	7.4 Course instructions articulate or link to the institution's student services and resources that can help learners succeed.	1
Accessibility* and Usability	8.1 Course navigation facilitates ease of use.	3
	8.2 The course design facilitates readability.	3
	8.3 The course provides accessible text and images in files, documents, LMS pages, and web pages to meet the needs of diverse learners.	3
	8.4 The course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners.	2
	8.5 Course multimedia facilitate ease of use.	2
	8.6 Vendor accessibility statements are provided for all technologies required in the course.	2

\* Meeting QM Specific Review Standards regarding accessibility does not guarantee or imply that the specific accessibility regulations of any country are met. Consult with an accessibility specialist to ensure that accessibility regulations are met.

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## **APPENDIX B**

### **Survey Instrument Informed Consent**

#### **Sam Houston State University**

#### **Consent for Participation in Research**

**DETAILED CONSENT** *Does Quality Matter? A look at Quality Matters Impact on Online Doctoral Students of Quality Assurance.*

#### **Informed Consent**

My name is *Quentin Bellard*, and I am a doctoral student of the College of Education at Sam Houston State University. I would like to take this opportunity to invite you to participate in a research study of *student perception towards quality assurance of online learning in accordance to the Quality Matters rubric*. I hope that data from this research will *help towards creating high quality online courses*. You have been asked to participate in the research because *you are a current online graduate student enrolled in the doctoral program within the College of Education and may be eligible to participate*. The research is relatively straightforward, and we do not expect the research to pose any risk to any of the volunteer participants. If you consent to participate in this research, you will be asked to participate in this study by filling out a brief survey followed by an interview asking you questions about your perception of online learning as it pertains to the Quality Matters rubric.

Any data obtained from you will only be used for the purpose of improving the design and development of our online courses. Under no circumstances will you or any other participants who participated in this research be identified. In addition, your data will

remain confidential. Your survey responses will be kept confidential to the extent of the technology being used.

This research will require about 3-5 minutes to complete the survey. Participants will not be paid or otherwise compensated for their participation in this project. The interviews will be recorded and you can choose to review the video if you would like. The videos will be destroyed three years after the completion of the study.

Your participation in this research is voluntary. Your decision whether or not to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. If you have any questions, please feel free to ask me using the contact information below. If you are interested, the results of this study will be available at the conclusion of the project.

If you have any questions about this research, please feel free to contact me, Quentin Bellard or Dr. Frank Creghan or Dr. Debra Price. If you have questions or concerns about your rights as research participants, please contact Sharla Miles, Office of Research and Sponsored Programs, using her contact information below.

<p>           Quentin Bellard            SHSU Student            Sam Houston State            University            Huntsville, TX 77341            Phone: (409) 223-9688            E-mail:            qjbellard@protonmail.com         </p>	<p>           Dr. Frank            Creghan            SHSU School of            Teaching and            Learning            Sam Houston            State University            Huntsville, TX            77341            Phone: (936)            294-3325            E-mail:            flc003@shsu.edu         </p>	<p>           Dr. Debra Price            SHSU School of            Teaching and Learning            Sam Houston State            University            Huntsville, TX 77341            Phone: (936) 294-1125            E-mail:            EDU_DPP@SHSU.EDU         </p>	<p>           Sharla Miles            Office of            Research            and            Sponsored            Programs            Sam            Houston            State            University            Huntsville,            TX 77341            Phone: (936)            294-4875            Email:            irb@shsu.edu         </p>
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**APPENDIX C****Quality Assurance Survey**

Q1 What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other (specify) \_\_\_\_\_

Q2 In what state or U.S. territory do you live?

\_\_\_\_\_

Q3 What generation do you fall under?

- ☐ Traditionalists or Silent Generation (Born 1945 and before)
- ☐ Baby Boomers (Born 1946-1964)
- ☐ Generation X (Born 1965-1976)
- ☐ Millennials or Generation Y (Born 1977-1995)
- ☐ Generation Z (Born 1996-Present)

Q4 Which of the following categories best describes your employment status?

- ☐ Employed, working 40 or more hours per week
- ☐ Employed, working 1-39 hours per week
- ☐ Not employed, looking for work
- ☐ Not employed, NOT looking for work
- ☐ Disabled, not able to work

Q5 Are you Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Cuban-American, or some other Spanish, Hispanic, or Latino group?

- ☐ I am not Spanish, Hispanic, or Latino
- ☐ Mexican
- ☐ Mexican-American
- ☐ Chicano
- ☐ Puerto Rican
- ☐ Cuban
- ☐ Cuban-American
- ☐ Some other Spanish, Hispanic, or Latino group
- ☐ From multiple Spanish, Hispanic, or Latino groups
- ☐ I rather not say

Q6 Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific islander, or some other race?

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ From multiple races
- ☐ I rather not say

Q7 Which of the following best describes your current relationship status?

- ☐ Married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married
- ☐ In a domestic partnership or civil union
- ☐ Single, but cohabiting with a significant other
- ☐ Single, never married

Q8 What is your comfort level towards being in a fully online graduate program? 1 being the lowest and 5 being the highest.

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Q9 What was your primary reason for enrolling in a fully online graduate program?

- ☐ Convenience
- ☐ Flexibility
- ☐ Affordability
- ☐ Don't have to commute back and forth to campus
- ☐ Prefer to learn online

☐ Balance

☐ Click to write Choice 7

---

Q10 Have you taken online courses previously before starting the doctoral program?

☐ Yes

☐ No

Q11 How many hours have you completed in the doctoral program?

☐ 0-15

☐ 18-36

☐ 39-60

☐ More than 60

Q12 Are you a student that requires assistance of the disabilities resource center (students with disabilities)?

☐ Yes

☐ No

☐ I'm not sure

Q13 On a scale of 1-5 how high of a level of quality assurance do you feel is present in the doctoral program?

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

**APPENDIX D**  
**Contact Information Survey**

Q1 Name

---

Q2 Email address

---

Q3 What is your gender?

☐ Male

☐ Female

☐ Other (specify) \_\_\_\_\_

Q4 In what state or U.S. territory do you live?

---

Q5 What generation do you fall under?

☐ Traditionalists or Silent Generation (Born 1945 and before)

☐ Baby Boomers (Born 1946-1964)

☐ Generation X (Born 1965-1976)

☐ Millennials or Generation Y (Born 1977-1995)

☐ Generation Z (Born 1996-Present)

Q6 Which of the following categories best describes your employment status?

- ☐ Employed, working 40 or more hours per week
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- ☐ Not employed, looking for work
- ☐ Not employed, NOT looking for work
- ☐ Disabled, not able to work

Q7 Are you Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Cuban-American, or some other Spanish, Hispanic, or Latino group?

- ☐ I am not Spanish, Hispanic, or Latino
- ☐ Mexican
- ☐ Mexican-American
- ☐ Chicano
- ☐ Puerto Rican
- ☐ Cuban
- ☐ Cuban-American
- ☐ Some other Spanish, Hispanic, or Latino group
- ☐ From multiple Spanish, Hispanic, or Latino groups
- ☐ I rather not say

Q8 Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific islander, or some other race?

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ From multiple races
- ☐ I rather not say

Q9 Which of the following best describes your current relationship status?

- ☐ Married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married
- ☐ In a domestic partnership or civil union
- ☐ Single, but cohabiting with a significant other
- ☐ Single, never married

## **APPENDIX E**

### **Contact Information Survey**

#### **Course Overview and Introduction**

1. Did the professor make clear what the purpose was for the course and what was expected of you?

#### **Learning objectives (Competencies)**

1. Did the course and weekly learning objectives describe the outcomes expected of you? If so please provide an example. If not, what could have the professor done differently?

#### **Assessment and Measurement**

1. How did the assessments measure your progress according to the course's level of mastery? Well or not well? If well then in what way? If not well, where was the breakdown?

#### **Instructional Materials**

1. What types of instructional materials were used (textbook, videos, etc.)? Also, explain how the instructional materials contributed to achieving the course learning objectives.

2. Did you rely more on instructor supplied content (content the instructor made themselves) or content provided by a third party such as YouTube videos and/or the textbook. Which content helped more with meeting objectives?

#### **Learning Activities and Learner Interaction**

1. What learning activities (group activities, discussion boards, assignments, etc.) were most beneficial to you in achieving the course learning objectives?

2. Explain how your interactions with the instructor contributed to the course learning objectives.

3.Explain how your interactions with other students contributed to the course learning objectives

### **Course Technology**

1.How well did the course technologies (video, web conferences, etc.) help you achieve the course learning objectives?

2.Do you have any suggestions for improvement in the course technologies?

3.Do you feel your privacy was protected sufficiently when using course technologies

### **Learner Support**

1.Did you use technical support during the class? If so, for what problem and how was it helpful?

2.If you used student services, how helpful were they? If so what services did you use and was it helpful?

### **Accessibility and Usability**

1.Were there any issues to establishing your need for accessibility tools and getting the support you need?

## VITA

Quentin Bellard

### EDUCATION

Doctorate of Education (December 2020) in Instructional Systems Design and Technology at Sam Houston State University, Huntsville, TX. Dissertation title: “Does quality matter? A look at quality matters impact on online doctoral students of quality assurance.”

Masters of Education (December 2011) in Education Technology Leadership at Lamar University, Beaumont, TX.

Bachelor of Business Administration (December 2004) in Management Information Systems at Lamar University, Beaumont, TX.

### EMPLOYMENT & TEACHING EXPERIENCE

#### **Adjunct Instructor**

Jan. 2020-Present

*Lamar University, College of Business*

- Create an effective learning environment through the use of a variety of instructional methods.
- Grade classwork and assignments.
- Responsive to student questions and concerns. Provide great customer service to our students.
- Remain knowledgeable about advances in their disciplines, in learning theory, and in pedagogy.
- Support the college’s strategic plan and the department’s goals.

#### **Academic Coach**

Jan. 2020-Present

*Instructional Connections*

- Grade assignment per faculty directions
- Monitor discussion threads
- Answer inquiries/emails within 24 hours
- Monitor student engagement
- Provide online student support
- Regularly collaborate with university faculty of record

**Interim Director**

Sep. 2019-Dec. 2019

*Lamar University, Center for Teaching and Learning Enhancement*

- Chairs to create faculty and educational development programs that respond to faculty needs and to institutional strategic planning.
- Foster a culture of collegiality, collaboration, teaching innovation, and productivity by creating and facilitating evidence-based programs to support effective teaching, publishing and productivity, and the tenure and promotion process.
- Provide support, mentoring, and feedback for faculty in their teaching practice and publishing and productivity, especially during the tenure and promotion process.
- Lead orientations and training programs for new faculty and department chairs.
- Create online and/or print resources to provide education and support about teaching, mentoring, and other relevant issues.

**Instructional Designer**

Mar. 2012-Present

*Lamar University, Distance Learning*

- Assist with planning and development of programs and curriculum in an online educational environment
- Participates in long-range strategic planning for public educational programs
- Play a key role in the course production process, working with faculty, administrators and Blackboard support to ensure course revision and development deadlines are met
- Counsels with educators/topic specialists to assemble data in branches of knowledge
- Responsible for assisting faculty and staff with new and emerging technology strategies in delivery of synchronous and asynchronous learning activities
- Assists with training or mentoring to faculty; Provides student training to prepare them for online learning
- As an instructional designer, ensures clarity, organization, accuracy, style, and quality of written work
- Plans and creates complex specialized educational modules and course materials for teacher driven college courses, utilizing the ADDIE model
- Coordination and Tracking for Migration and Production of courses
- Develop a systematic instructional design model and components for developing technology rich learning environments
- Reviews online undergraduate and graduate online courses using the Quality Matters rubric

**Assistant Director of Residence Life**

Oct. 2007-Mar. 2012

*Lamar University, Residence Life*

- Supervise hiring, training, termination, and development
- Directly Supervise 5 resident directors including performance appraisals and personnel practices
- First point of contact in the handling of employee & labor relations issues
- Staff Development Manage-Plan 3 in-services a semester to enhance the Community Leaders development Proficient in StarRez-Resident Database and Student Conduct Cases Student Conduct Officer
- Works closely with University Police on safety, behavioral issues, and emergencies.  
Responds to parents/legal guardians and other constituencies regarding student issues, concerns, or questions
- Management of accounts payables & collections for department
- Marketing & leasing of the housing facilities

**Database Administrator/Systems Administrator**

May 2007-Mar. 2008

*Lamar University, Recreational Sports*

- Security administration- adding & removing users, checking for security problems
- Ability to detect & resolve error conditions. Input lists of items, numbers, or other data
- Modify existing data, edit current information, or proofread new entries into a database
- Ability to perform repetitive data entry with high degree of accuracy & attention to detail

**Resident Director**

Aug. 2004-Oct. 2007

*American Campus Communities*

- Supervisor to the residence life staff including 8 Community Assistants and 2 Student Workers
- Ability to aid in development of a community which promotes academic success and commitment to diversity
- Actively participated in hiring, training, evaluations, development, and rewards of Residence Life Staff
- Assists in setting departmental direction to align with Cardinal Village and Lamar University initiatives
- Coordinator of programming & community development
- Enforce rules & regulations of Cardinal Village & Lamar University through student discipline & policy enforcement
- Coordinate staff meetings, office schedules, office management, risk management, and fire safety
- Leasing, vendor relations, and budget. Oversee maintenance and assist in daily operations in a rotating On-Call nights/weekend shifts ensuring the safety of all residents in Cardinal Village

## ACADEMIC AWARDS

Fifteen Years of Service, Texas State University System, Lamar University.

Distinguished Staff Award 2018, Texas State University System, Lamar University.

Ten Years of Service, Texas State University System, Lamar University.

Five Years of Service, Texas State University System, Lamar University.

## PROFESSIONAL MEMERSHIPS

Online Learning Consortium

Quality Matters

Texas Association of Black Personnel in Higher Education

## PUBLICATIONS

Bellard, Q. (2019, May 17). Creating quality designed online courses. *eLearning Industry*. Retrieved from <https://elearningindustry.com/quality-designed-online-courses-creating>.

Bellard, Q., McCoy, K., & Varner, R. (2019, May 6). 3 cool tech tools to consider for the digital classroom. *Faculty Focus*. Retrieved from [https://www.facultyfocus.com/articles/teaching-with-technology-articles/3-cool-tech-tools-to-consider-for-the-digital-classroom/?st=FFdaily;s=FF190506;utm\\_term=FF190506&utm\\_source=ActiveCampaign&utm\\_medium=email&utm\\_content=Tech+Tools+for+the+Classroom&utm\\_campaign=FF190506](https://www.facultyfocus.com/articles/teaching-with-technology-articles/3-cool-tech-tools-to-consider-for-the-digital-classroom/?st=FFdaily;s=FF190506;utm_term=FF190506&utm_source=ActiveCampaign&utm_medium=email&utm_content=Tech+Tools+for+the+Classroom&utm_campaign=FF190506).