Online Teaching Self-Efficacy: An Explanatory Case Study

Lady Moran

Follow this and additional works at: https://digitalcommons.memphis.edu/etd

Recommended Citation
https://digitalcommons.memphis.edu/etd/3366

This Dissertation is brought to you for free and open access by University of Memphis Digital Commons. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of University of Memphis Digital Commons. For more information, please contact khggerty@memphis.edu.
ONLINE TEACHING SELF-EFFICACY: AN EXPLANATORY CASE STUDY

by

Lady Moran

A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Education

Major: Instruction and Curriculum Leadership

The University of Memphis

May 2022
Acknowledgement

This dissertation is dedicated to my family and friends whose constant support, faith, and encouragement made this work possible. Special acknowledgment is made to my mother, who instilled in me a determination to accomplish and persevere from a young age. Much thanks to Dr. Anna Carrie Webb for her guidance and assistance during this process; she may have been my biggest cheerleader. Thank you to my committee, especially to Dr. Craig Shepherd, my advisor, whose patience and careful stewardship kept me on track and motivated. And finally, to my boys. I am so fortunate in my life to never have to do anything alone. My husband Matthew’s consistent support and faith in all my endeavors helps me realize that all things are possible. And lastly, to my three sons, Charles, Thomas, and Henry. They are forever my inspiration, the purpose behind my dreams, and the drive behind all my goals. Being their mother will always be my greatest accomplishment.
Abstract

Data reveals growth in online learning enrollment; additionally, university strategic initiatives and emergency response efforts include reliance on online education. However, the literature indicates that many who teach in post-secondary institutions are reluctant to adopt online education. There is a need to reduce existing barriers regarding online education and build instructor online teaching self-efficacy. A suggestion for increasing online instructor self-efficacy exists within the bounds of professional development. A qualitative explanatory case study was used to determine how the completion of the Quality Matters Applying the Quality Matters Rubric (APPQMR) workshop, a training rooted in best practices of course design, contributed to how an instructor builds their online teaching self-efficacy. Interviews with graduates of the APPQMR training, a workshop observation, and documents used within the training were analyzed. Results indicated that the workshop supports online teaching self-efficacy by contributing to the various sources of self-efficacy. It was found that the workshop increased participant knowledge of online instruction, which left positive impressions on online teaching and learning. Additionally, the knowledge gained from the workshop encouraged participant perceptions of their abilities to create meaningful online learning environments, set goals to overcome challenges, and revealed adept institutional support structures to promote participant achievement with online teaching. Institutions can use the findings in this study to tailor professional development initiatives in course design to support cultivating the online faculty.

Keywords: Online teaching self-efficacy, Quality Matters, professional development
Table of Contents

CHAPTER ONE: INTRODUCTION ............................................................................................................. 6
  Problem of Practice Statement ........................................................................................................... 9
  Purpose Statement ............................................................................................................................ 11
  Theoretical Framework ...................................................................................................................... 12
  Questions .......................................................................................................................................... 13
  Definitions ......................................................................................................................................... 14

CHAPTER TWO: REVIEW OF THE LITERATURE .............................................................................. 16
  Theoretical Context .......................................................................................................................... 16
  Online Teaching Challenges ............................................................................................................ 25
  Instructor Development ..................................................................................................................... 34
  Conclusions and Recommendations ................................................................................................. 37

CHAPTER THREE: METHODOLOGY ............................................................................................. 39
  The Investigation Plan ....................................................................................................................... 39
  Participants ........................................................................................................................................ 41
  Setting .............................................................................................................................................. 43
  Data Collection Methods .................................................................................................................. 46
    Semi-Structured Interviews ............................................................................................................ 49
    Observations ................................................................................................................................... 51
    Documents & Digital Materials ...................................................................................................... 53
  Researcher Role ............................................................................................................................... 54
  Data Collection Procedures .............................................................................................................. 55
  Analysis ............................................................................................................................................ 57

CHAPTER FOUR: RESULTS ............................................................................................................. 63
  Participant Description ...................................................................................................................... 64
  Overview of Themes .......................................................................................................................... 71

CHAPTER FIVE: DISCUSSION AND CONCLUSIONS ................................................................... 105
  Discussion ......................................................................................................................................... 105
  Suggestions to Improve Practice ...................................................................................................... 116
  Conclusion ........................................................................................................................................ 121
<table>
<thead>
<tr>
<th>REFERENCES</th>
<th>124</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX A</td>
<td>143</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>144</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>146</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>150</td>
</tr>
<tr>
<td>APPENDIX E</td>
<td>153</td>
</tr>
<tr>
<td>APPENDIX F</td>
<td>155</td>
</tr>
<tr>
<td>APPENDIX G</td>
<td>157</td>
</tr>
<tr>
<td>APPENDIX H</td>
<td>158</td>
</tr>
<tr>
<td>APPENDIX I</td>
<td>159</td>
</tr>
<tr>
<td>APPENDIX J</td>
<td>160</td>
</tr>
<tr>
<td>APPENDIX K</td>
<td>161</td>
</tr>
<tr>
<td>APPENDIX L</td>
<td>163</td>
</tr>
<tr>
<td>APPENDIX M</td>
<td>164</td>
</tr>
<tr>
<td>APPENDIX N</td>
<td>166</td>
</tr>
<tr>
<td>APPENDIX O</td>
<td>170</td>
</tr>
</tbody>
</table>
### List of Tables

Table 1 Research Question and Method Alignment ......................................................... 47

Table 2 Research Question and Analysis Alignment .......................................................... 60

Table 3 Participant Demographics .................................................................................... 63

Table 4 Findings Alignment to Research Questions ............................................................ 69
List of Figures

Figure 1. Case Study Schedule.................................................................59

Figure 2. Professional Development & Sources of Self-Efficacy.........................71
List of Abbreviations

Americans with Disabilities Act of 1990 (ADA) ......................................................... 74
Applying the Quality Matters Rubric (APPQMR).......................................................... 6
Full Time Equivalence (FTE) ..................................................................................... 40
Institutional Review Board (IRB) ............................................................................. 29
Learning Management System (LMS) ...................................................................... 6
Quality Matters (QM) ............................................................................................. 6
Social Learning Theory (SCT) .................................................................................. 12
CHAPTER ONE: INTRODUCTION

Online learning enrollment is steadily growing in higher education. According to Allen and Seaman (2016), 69% of leaders in academia indicated that online learning is critical to their strategic growth. In 2018, online enrollment, despite a decline in overall higher education enrollments over the past four years, continued to increase (Allen & Seaman, 2018). Online education has also become an educational modality for emergency response plans to continue teaching efforts when universities are faced with natural disasters or pandemics. Unfortunately, institutions may not be adequately prepared to make the shift to online teaching confidently and effectively (Damsa et al., 2021). For example, in the Spring of 2020, higher education was forced to quickly pivot to fully online education due to a global pandemic. This crisis response forced most post-secondary instructors to move their classes to a Learning Management System (LMS) and teach online. Studies from this swift transfer to online teaching and learning articulate the many issues students and instructors faced with moving classes online, including apprehension about online teaching technologies, negative perceptions of the online learning experience, inadequate professional development for online teaching, limited access to resources, and diminished learning experience (Gillis & Kruss, 2020; Lederman, 2020). The pandemic illuminated how online learning environments were still met with trepidation in higher education despite the need for the modality as reflected by growing online learner enrollments. This demonstrates that higher education must still thoroughly cultivate digital competence to promote, build, and sustain online educators (Damsa et al., 2021).

Faculty are necessary and central to online learning successful delivery. However, many factors exist that inhibit online teaching success and negatively influence effective online
teaching and learning. These inhibitions include negative perceptions of online teaching and learning, inadequate training for online educators, and apprehension regarding online teaching technologies (Alanzy, 2017; Corry & Stella, 2018; Glass, 2017). The gap between the need for online courses and the available online instructors also demonstrates how unprepared institutions are to meet the demands of the growing online student population. A 2019 study by Scott et al. surveyed 1,967 faculty members and found that only 46% reported teaching an online course for credit. The inexperience, as well as hesitancy in the adoption of online course instruction, presented major challenges for instructors during the 2020 move to online learning for the pandemic. Obstacles during this time included skills to design online courses, competence to teach online, and online teaching self-efficacy (Damsa et al., 2021; Dietrich et al., 2021). Additionally, important barriers to online teaching include online teaching self-efficacy, instructor persistence, and motivation because they directly impact student success in the online course (Clandinin & Hsu, 2017; Robinia, 2008). Highly efficacious teachers often persist through online teaching challenges, leading to increased student support efforts (Gosselin, 2009). Unfortunately, research indicates a lack of adequate training for online instructors, making those obstacles and barriers difficult to address and overcome (Allen & Seaman, 2016; Horvitz et al., 2015). Inconsistent training opportunities and irrelevant training topics contribute to the professional development challenges for online instructors (Mercer, 2014). This need for online instructor training requires exemplar courses, instructional design best practices, and testimonials from other professors to reduce online teaching skepticism and support self-efficacy (Horvitz et al., 2015).
Self-efficacy is an individual’s belief in their capacity to execute certain behaviors (Bandura, 1977). Teaching self-efficacy is the teacher’s belief in their ability to execute required activities to successfully achieve explicit teaching tasks (Tschannen-Moran et al., 1998). This definition expanded to online teaching self-efficacy includes task achievement occurring in the online classroom or LMS. High levels of self-efficacy to teach in the online classroom demonstrates a commitment to teaching and supporting instructional best practices (Gosselin, 2009, Tschannen-Moran & Hoy, 2001). It also results in higher rates of student engagement and increases teacher resilience during difficult situations (Clandinin & Husu, 2017; Ouyang & Scharber, 2017). Additionally, online teaching self-efficacy is related to student success in online courses (Horvitz et al., 2015; Prerrault et al., 2002; Tschannen-Moran & Hoy, 2001). People with high teaching self-efficacy, when facing challenges and negative outcomes, are more likely to persist through the tasks and make efforts to change negative learning outcomes (Horvitz et al., 2015; Tschannen-Moran & Hoy, 2001). The challenge is supporting instructors at the beginning of their online teaching career, so they have an opportunity to build that resilience and online teaching self-efficacy (Horvitz et al., 2015). When considering teaching self-efficacy’s relationship to effective teaching and learning, online teaching self-efficacy should be a priority for universities that continue to rely on online learning as part of their strategic initiatives to meet the demand for online enrollments.

Unfortunately, studies on teaching self-efficacy have predominantly been based on in-classroom instruction (Ma et al., 2021). Teachers tend to feel less confident about online teaching due to the physical difference between the face-to-face and the online environments (Black, 2019). Reasons for the reported low online teaching self-efficacy also include deficient
online pedagogical knowledge as teacher education often focuses on face-to-face pedagogy, discomfort with the online teaching technologies due to inexperience, and the laborious task of online teaching which includes course design knowledge and execution (Black, 2019; Ricther & Idelman, 2017). Those without online teaching experience report low self-efficacy when required to teach online (Devica, 2015). However, teachers with prior experience in online teaching are more likely to be motivated to teach online (Horvitz et al., 2015). These issues about confidence, lack of training, and deficient online teaching knowledge address opportunities for research in understanding the construction of online teaching self-efficacy outside of direct online teaching experience, which takes time to acquire.

One way to impact instructor experiences in online teaching is to provide instructors with professional development opportunities that model best practices (Elliott et al., 2015). Many studies have reported that online professional development increased online teaching knowledge and improved faculty perceptions (Ginzburg et al., 2010; Meyer & Murrell, 2014). Therefore, this study will use Bandura’s self-efficacy theory as a framework to explore how instructor online teaching self-efficacy is cultivated through professional development.

**Problem of Practice Statement**

There is minimal research on online learning professional development opportunities for faculty who teach online. The research primarily focuses on online faculty anecdotes and self-report measures (Corry & Stella, 2018; Kinnie, 2012; Reilly et al., 2012). Online instructors have unique professional development needs which include LMS training and pedagogical training for online teaching and online learners (Berry, 2019; Chen et al., 2017). Many faculty report that professional development is disconnected from their teaching goals and needs (Berry, 2019;
Kang, 2012). Additionally, when teaching online, most faculty must design and develop their courses (Powell, 2010) but may have inadequate training in course design best practices (Horvitz et al., 2015). Researchers are seeking best practices for training online educators (Graham & Thomas, 2011; McMahon, 2021; Ray, 2009; Wilson, 2012) so that they are not forced to learn online teaching competencies in real-time, which may cause unnecessary hurdles with course delivery, potentially diminishing online teaching self-efficacy (Adnan, 2018; Powell, 2010). Like online teaching self-efficacy, the literature reports that quality online course design also contributes to student success and effective teaching and learning in online courses (Hixon et al., 2015; Puzziferro, 2006). Quality course design often includes course organization and presentation, learning objectives and assessment alignment, interpersonal interaction within the course, and appropriate technology usage (Jaggars & Xu, 2016).

Quality online course design is the focus of Quality Matters (QM), whose professional development opportunities prepare instructors to design online courses. Their workshop, Applying the Quality Matters Rubric (APPQMR), introduces participants to a course design rubric, titled the Quality Matters Higher Education Rubric, Sixth Edition, that emphasizes best practices. However, research on this workshop typically addresses its impact on participant perceptions of faculty development and course design (Diehl, 2016; Kearns & Mancilla, 2017; McMahon & Stark, 2015). There are few correlations to course design’s impact on online teaching self-efficacy (Corry & Stella, 2018; McQuiggan, 2012). Corry and Stella (2018) conducted an extensive literature review regarding teacher self-efficacy in online education and found that research specifically related to online teaching self-efficacy was needed. While
training faculty in online course design can be addressed with professional development, building online teaching self-efficacy continues to be a problem.

This problem is important because studies identified that online teaching self-efficacy is related to effective online teaching and learning (Barni et al., 2019; Klassen & Tze, 2014; Zee & Koomen, 2016). In addition, preliminary studies from Spring 2020 show “college leaders and professors overwhelmingly believe that the learning experience was subpar, which is not surprising given the lack of faculty experience online” (Lederman, 2020, p. 1). It is alarming that despite online learning’s long presence in higher education, remote instruction during the pandemic became an obstacle that adversely affected student learning (Damsa et al., 2021). This experience should highlight the importance of increasing support for online teaching agendas at institutions for higher learning. Identifying the contribution of professional development to online teaching self-efficacy can help support the increased need for online courses as demonstrated by growing online enrollments and prepare universities for future emergencies that activate fully online instruction.

**Purpose Statement**

The purpose of this qualitative, explanatory case study (Creswell & Creswell, 2018; Yin, 2018) is to investigate, how, if at all, online teaching self-efficacy is developed as a result of the Quality Matters APPQMR virtual workshop for full-time and part-time faculty at a four-year institution.

This inquiry is rooted in pragmatism (Savin-Baden & Major, 2013), and the theory framing this study is self-efficacy theory (Bandura, 1994). This study’s focus of interest is the
development of faculty’s online teaching self-efficacy, which is their perceived ability to accomplish online teaching tasks, as they complete the APPQMR workshop.

**Theoretical Framework**

Bandura’s self-efficacy theory provides the lens for this qualitative study. Bandura (1986) posited that there are associations between cognitive, environmental, and behavioral factors that have an impact on human behavior, which is mediated by self-efficacy.

Self-efficacy is a person’s belief in their ability to identify and execute actions to successfully perform a task. Bandura (1994) wrote that people who believe in their ability to accomplish a task have higher self-efficacy. As a result, that person is more likely and willing to persist in task completion. On the other hand, people who have low self-efficacy will doubt their capabilities in task achievement and are more likely to falter because of doubt and lack of persistence. Four sources for self-efficacy exist and can either contribute positively or negatively to person’s self-efficacy: vicarious experiences, social persuasion, mastery experiences, and physiological and affective states (Bandura, 1997). Vicarious learning experiences refer to experiences where the individual is able to observe somebody perform a task. Social persuasion refers to receiving positive or negative verbal feedback. Mastery experiences provide individuals with opportunities to accomplish tasks, developing their belief that they can overcome obstacles and succeed with each experience. Finally, physiological and affective states refer to an individual's mood. Nervousness and anxiety are vulnerabilities that can lower perceived self-efficacy, while an ability to control emotions relates to higher perceived self-efficacy (Tschannen-Moran & Hoy, 2009). Additionally, negative attitudes and perceived barriers can
impact an individual's physiological state (Bandura, 1994; Pajares, 2002; Tschannen-Moran & Hoy, 2009).

This theory is integral to this study because the online teaching self-efficacy of an instructor is critical to their ability to persist during times of uncertainty and stress (Robinia, 2008). Furthermore, research shows that the faculty member’s sense of teaching self-efficacy is related to student learning, and this relationship is also observed when faculty teach online (Ouyang & Scharber, 2017). With increased online enrollment and the role of online learning in university strategic plans, the instructor’s role in creating a meaningful online teaching and learning environments is significant.

Exploring instructor experiences in a professional development workshop and how it contributes to the participant’s online teaching self-efficacy may yield new training pathways for online instructors that will contribute to their success and confidence in teaching online courses.

Questions

This study will focus on one central question and five sub-questions.

Central Question. How was perceived online teaching self-efficacy influenced during the Quality Matters APPQMR workshop as faculty learned about best practices in online course design?

Sub-Research Question 1. How did participation in the APPQMR workshop contribute to the participant’s knowledge of teaching online?

Sub-Research Question 2. How did participation in the APPQMR workshop contribute to the participant’s attitude toward online learning?
Sub-Research Question 3. How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to create a meaningful online learning environment?

Sub-Research Question 4: How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to overcome online teaching challenges?

Sub Research Question 5: What sources, if any, within the APPQMR workshop influence the participant’s belief in their ability to teach an online course?

Definitions

APPQMR. Quality Matters’ flagship workshop on the Quality Matters Higher Education Rubric, Sixth Edition and its use in reviewing online course design. This workshop is offered online and virtually. For the purposes of this research, the virtual method will be studied (Quality Matters, 2021).

Distance Education. Instruction in which student(s) and teacher(s) are separated by distance and or time (Yacci, 2000).

Emergency Remote Instruction. A temporary shift of instructional method for instruction due to a crisis. The primary objective during this circumstance is to provide access to instruction. (Hodges et al., 2020).

Hybrid Instruction. Course must have both face-to-face and online components using the LMS. It uses a mix of these instructional methods where at least 50% of course content and interaction is online, but less than 90% (Austin Peay State University, 2021).

Online Learning. Instruction that occurs via a computer connected to a network offering the opportunity to learn at any time and from any location (Cojocariu et al., 2014).
Persistence. Continuing on a task or course of action despite challenges, difficulty, and obstacles (Stoeckler et al., 1998).

Online Course. The site defines an online course as where 100% of the course is delivered online (Austin Peay State University, 2021).

Online Teaching self-efficacy. The belief that instructors have about knowledge, skills, and abilities needed to be effective in the online classroom (McMahon, 2021).

Self-efficacy. Beliefs in a person’s capabilities to organize and execute actions required to accomplish a task or meet a goal (Bandura, 1977).

Teaching self-efficacy. Beliefs of a teacher about their personal capabilities in light of the requirements of a particular teaching task (Tschannen-Moran et al., 1998).


CHAPTER TWO: REVIEW OF THE LITERATURE

The construct of self-efficacy plays an important role in online teaching and learning environments and is the theoretical framework behind this study. This chapter focuses on the body of work addressing the history of self-efficacy research for online teaching, attitudes and barriers regarding online teaching, and the state of professional development opportunities for online instructors. These subjects culminate in developing a roadmap for how professional development can influence online teaching attitudes and perceptions while identifying the need to explore additional professional development solutions to support online teaching self-efficacy.

Theoretical Context

Self-Efficacy

Self-efficacy is a construct of Social Cognitive Theory (SCT). Social Cognitive Theory describes human behavior through a three-way reciprocal model where personal factors, environmental influences, and behavior constantly interact (Bandura, 1997; Eun, 2019; Williams & Rhodes, 2016). This interaction forms the basis for behavior but also allows for interventions to change behaviors (Bandura, 1977). A basic premise of this theory is that people learn through their experiences, through observations, and through the results of others’ actions and experiences.

Self-efficacy relates to a belief in one’s ability to accomplish a specified behavior by setting realistic goals and outcome expectations (Bandura, 1997). Self-efficacy influences an individual’s choices, the effort they put forth in situations, and the effort exerted to overcome obstacles during challenges in those situations (Bandura, 1994). Furthermore, self-efficacy relates to self-perception of competence as opposed to the actual level of competence. Past
performances, situational factors, and personal knowledge and skills influence how that person perceives their abilities to achieve the task (Eun, 2019). If a person has a high sense of self-efficacy for a specific situation, they are more likely to set higher goals and less likely to be afraid of failure (Woolfolk, 1998).

Moreover, self-efficacy is specific to a task, and the importance of that task determines the role task completion plays in the person’s perception of task achievement. Self-efficacy is not a trait but rather a person’s judgment about their capability to complete a task without that task achievement being evaluated (Alqurashi, 2016; Gist & Mitchell, 1992). Success, or lack of success, during a task can contribute to or detract from that individual’s self-efficacy; therefore, self-efficacy beliefs can be cyclical, either validating beliefs of capability or beliefs of ineffectiveness (Tschannen-Moran & Hoy, 2007). Self-efficacy influences effort and persistence that affects performance, which in turn becomes a new source of information that either lifts or diminishes self-efficacy. This dynamic nature of self-efficacy changes over time as new information and experiences are obtained. Often, self-efficacy beliefs are in flux early in the learning process of task achievement but find stability over the course of time (Alqurashi, 2016; Bandura, 1986; Moriarty, 2014).

In summary, self-efficacy is “beliefs in one’s capabilities to organize and execute the course of action required to produce given attainments” (Bandura, 1997, p. 31). It is a person’s belief in their ability to persist in a task, despite the obstacles they may face, and achieve their expected outcomes. The construct of self-efficacy influences goals, emotional response, choices, effort, resilience, and persistence.

**Sources of Self-Efficacy**
Bandura (1997) was the first to posit that there are four distinct sources of self-efficacy: mastery experiences (also performance accomplishment), physiological and emotional states, vicarious experiences, and verbal (or social) persuasion. Extensive literature reviews by Alqurashi (2016) and Corry and Stella (2018) continue to reveal these four sources as key indicators of self-efficacy. Mastery experiences refer to the experiences gained when a new challenge is taken, and success is achieved. Vicarious experiences are described as observing a role model emulate the desired behavior. Social persuasion is related to factors that describe the positive impact words can have on a person’s confidence. And physiological and emotional states refer to the importance of the context and overall mental health state of the person while they are developing and maintaining self-efficacy. Together these sources formulate self-efficacy and the person’s perceived level of competence during a given situation.

**Mastery Experience.** Mastery experiences provide experiences filled with opportunities to accomplish a range of tasks. This source is the most influential and effective at influencing self-efficacy as it provides authentic and personal opportunities for task achievement (Tschannen-Moran et al., 1998). These experiences increase self-efficacy by imparting a belief that obstacles can be overcome when effort is exerted (Bandura, 1997). Positive experiences lead the individual to believe similar successes can be achieved in future tasks. If failures in task achievement are met during these experiences, self-efficacy may be undermined. If these failures occur before a positive view of one’s capabilities is established, building self-efficacy becomes more difficult (Bandura, 1994; Swanson 2012).

In teaching, mastery experience is first introduced through student teaching. Professional development and mastery experiences are also related as professional development can present
new knowledge for implementation. The use of new knowledge introduced during this professional development has been shown to contribute to changes in self-efficacy, whereas simple exposure to the new information does not impact self-efficacy (Ross, 1994; Tschannen-Moran & McMaster, 2009). Therefore, in addition to presenting new information, individuals must be afforded the opportunity to practice implementation, or gain experience implementing the new information, for self-efficacy to be influenced.

**Physiological and Emotional States.** Moods and attitudes impact self-efficacy. Feelings of fear and nervousness can translate to vulnerability and lower one’s belief in task accomplishment (Bandura, 1997). The perceived ability to exercise control over challenging tasks can influence self-efficacy beliefs (Bandura, 1986). These states translate to levels of arousal for the individual. Moderate levels of arousal can be overcome and contribute to increased self-efficacy if that arousal is not debilitating and the challenge is overcome successfully. However, high levels of arousal may contribute to feelings of threat which will interfere with capabilities and successful task achievement, therefore diminishing self-efficacy (Gregoire, 2003; Tschannen-Moran & McMaster, 2009).

In teaching, this source may be seen through nervous anticipation before a new teaching experience. Training experiences and professional development may help ease this anticipation as these situations provide opportunities to try new strategies and ensure encouragement or assistance in a safe environment.

**Vicarious Experiences.** Vicarious experiences occur when the person observes others’ successes and failures in the task. If the person observes a peer persevere and succeed, their own confidence in task accomplishment increases as it helps them see themselves achieving the same
tasks (Bandura, 1994). This has the same effect in the opposite situation, where seeing a peer fail will diminish self-efficacy. The peer being observed must be viewed as similarly capable by the observer for various experiences to have an impact on the observer’s self-efficacy (Swanson, 2012). “The greater the assumed similarity between the observer and model, the more persuasive will be the belief that one possesses the capabilities to master comparable activities” (Tschannen-Moran & McMaster, 2009, p. 231). The observer then can assess their own capabilities and establish goals for their task achievement.

In teaching, this source is often achieved through the observation phase of a student teaching experience. When a novice teacher watches a successful teaching situation, they are likely to see that same situational exchange as manageable (McMahon, 2021; Tschannen-Moran & McMaster, 2009). People seek models who are proficient and can demonstrate competencies they wish to attain. Competent model sources transmit knowledge and teach observers effective skills and strategies for managing tasks through behavior and revealing their thought processes in determining courses of action or overcoming obstacles (Borup & Evmenova, 2019). Professional development models provide vicarious experiences through videos of the skills being taught or demonstration of those skills, then asking the observer to emulate the same task in a controlled environment.

**Verbal (Social) Persuasion.** Verbal, or social, persuasion can increase self-efficacy through verbal expressions of support and positive encouragement. People can be persuaded to believe they can accomplish the tasks they set out to accomplish. Bandura emphasizes that with this source, the measure of success must come from self-improvement as opposed to comparison of triumph over others (Bandura, 2009). The focus of the verbal expressions must be on the
individual’s achievement related to the task. Bandura (1997) also notes that “it is easier in times of difficulty, if significant others express faith in one’s capabilities than if they convey doubts” (p. 101), signifying that verbal persuasion is more effective if the source of the comments is esteemed by the individual. This esteemed individual can often be a known subject matter expert or someone at the administrator level.

In teaching, verbal support can come from leadership and administration as well as mentors. It bolsters the person’s belief that they can achieve the level of performance desired by the leadership or administrative source. This verbal persuasion can also be seen through professional development workshops that provide new strategies for teachers (Stein & Wang, 1988; Tschannen-Moran & McMaster, 2009), which can be augmented with verbal support from an administrator persuading the teacher that they can successfully implement the new strategies.

It should be acknowledged that verbal persuasion may have limited power in increasing self-efficacy when compared to the other sources (Tschannen-Moran et al., 1998); however, this type of appraisal results in bolstering an individual long enough to encourage increased effort and persistence in the task, contributing to mastery experiences and overall self-efficacy (Bandura, 2009; McMahon, 2021; Tschannen-Moran & McMaster, 2009).

**Consequences of Self-Efficacy**

Self-efficacy contributes to an individual’s resilience when challenges arise. Self-efficacy is important as it is directly related to persistence during a challenge and is independently associated with success in achieving goals regardless of skill level (Bandura, 1977; Morris & Usher, 2011; Williams & Rhodes, 2017). Bandura (1977) further determined that self-efficacy is a self-sustaining trait. When a person is driven to work through adversity to achieve their goal,
they gain positive experiences that power their self-efficacy. Self-efficacy beliefs can predict the effort people put forth in a task, how well they persevere through obstacles, and how effectively they regulate and motivate themselves (Morris & Usher, 2011; Williams & Rhodes, 2017).

Self-efficacy in education has initiated a rich line of research into how teacher self-efficacy is related to teacher tasks, outcomes, and impact on students (Gosselin et al., 2016; Robinia, 2008; Tschannen-Moran & Hoy, 2007). Educators with a higher sense of teaching self-efficacy have been found to be more devoted to academic activities, more patient with students encountering difficulties, and more willing to implement new teaching strategies to improve student learning outcomes (Gosselin, 2009). Instructors who believe in their ability to carry out the complex knowledge and skills required to design instruction will probably demonstrate greater effort, persistence, and resilience because of stronger self-efficacy beliefs (Tschannen-Moran & Hoy, 2007). Educators with a low sense of teaching self-efficacy are more likely to experience stress and burnout (Klassen & Chiu, 2010; Zee & Koomen, 2016). Because learning and growth in students have been found to correlate to teacher self-efficacy (Goddard et al., 2000; Tschannen-Moran et al., 1998), and because positive student outcomes drive educational systems, teacher self-efficacy is significant.

**Teaching and Online Teaching Self-Efficacy**

Teaching self-efficacy represents the teacher or instructor’s confidence in their ability to develop student learning and achieve particular teaching tasks (Perera et al., 2019; Tschannen-Moran et al., 1998). Highly efficacious instructors have also demonstrated a willingness to take on challenges and innovations (Corry & Stella, 2018).
The minimal mastery experiences novice teachers obtain contribute to the unstable nature of teaching self-efficacy during a teacher’s formative years (Bandura, 1997). Tschannen-Moran & Hoy (2007) found that novice teachers heavily relied on resources such as verbal persuasion from peers and vicarious experiences from mentors to bolster their teaching self-efficacy. Research indicates that novice teacher self-efficacy is more impressionable early and then is more resistant to change later during teaching careers as mastery experience takes over as the strongest source of teaching self-efficacy (Tschannen-Moran & McMaster, 2009). This demonstrates the need for teacher educators to be afforded learning opportunities that develop strong and resilient self-efficacy beliefs. A study by Morris and Usher (2011) identified that participants gained confidence in their teaching abilities because of training and structuring teaching experiences that enhanced professor pedagogical skills. The researchers proposed that arming instructors with tools and resources before the initial teaching experience can contribute to that instructor’s positive experiences and early successes, which can bolster self-efficacy beliefs.

Self-efficacy in online teaching links belief in ability to manage personal behaviors and cognitive processes with online instructional effectiveness (Hampton et al., 2020). However, teaching in online courses is different from teaching in a traditional face-to-face classroom. “It is not better or worse; it is simply different” (Hampton et al., 2020, p. 349). Online teaching can include a more time-consuming experience. Virtually managing student emotional experiences can also be challenging as body language cannot be interpreted in online environments (Ali et al., 2017; Gosselin, 2009). Students and instructors often feel isolated and frustrated with communication in the online learning environment as face-to-face conversation is eliminated,
often requiring a wait period between feedback and emails (Gosselin, 2009; Martin & Bolliger, 2018; St. Amant, 2006). Content is also presented and delivered differently as digital media is selected to convey what was previously presented in a face-to-face environment (Gazza, 2017; Gosselin, 2009; Hampton et al., 2020). These differences can take an immense amount of instructor time and energy and requires high self-efficacy for online teaching (Corry & Stella, 2018; Hampton et al., 2020; Northcote et al., 2015). These differences also mean that high self-efficacy in face-to-face instruction does not directly translate to online teaching self-efficacy (Corry & Stella, 2018; Hampton et al., 2020; Robinia, 2008).

Highly efficacious online instructors are also more likely to adopt new technologies and implement new online teaching strategies (Culp-Roche et al., 2021; Hampton et al., 2020). Horvitz et al. (2015) examined the impact of computer and technology savviness with online teaching self-efficacy and identified correlations between technology competence and the instructor’s perceived ability to teach online. Additional studies such as one by Bolliger and Wasilik (2009) support these positive correlations between technology ability and online teaching self-efficacy which further emphasizes this noteworthy relationship.

Finding ways to help instructors master online teaching skills and technology may improve their feelings of teaching self-efficacy (Horwitz et al., 2015). There are correlations between online teaching self-efficacy, student achievement, student engagement, and teaching satisfaction, further supporting the need for institutional focus on increasing instructor online teaching self-efficacy (Bao, 2020; Dolighan & Owen, 2020; Horwitz et al., 2015). These findings are significant because improved feelings of online teaching self-efficacy led to perseverance through challenges and persistence in teaching online (Dolighan & Owen, 2020; Williams &
With the increased demand for online classes, there is also a demand for competent and trained online instructors.

To focus on building the self-efficacy of instructors who teach in the online learning environment, the barriers and preconceived perceptions of teaching online must be identified. As previously described, although online learning is a growing interest for students, it is still met with skepticism by some faculty members. This creates a need for identifying the sources of this skepticism and addressing them in efforts to build online teaching self-efficacy.

**Online Teaching Challenges**

**Online Teaching Perceptions**

Research shows an increase in student credit hours for online learning over the last few years and a relatively slower increase in instructors teaching online courses (Allen & Seaman, 2016). According to the Education Department’s National Center for Education Statistics (NCES), in the 2017-2018 school year, students enrolled in exclusively online courses grew 15.4% (NCES, 2019). These studies also included research on faculty perceptions of online learning and faculty willingness to adopt new technology. According to Lederman (2019), a recent Gallup Poll of higher education faculty revealed that 39% say they are in full support of increased use of educational technologies, and over 60% disagree that online courses can achieve the same student learning outcome as face-to-face courses. In this section of the literature review, additional barriers will be discussed, which include perceptions of online learning, readiness to teach online, and inadequate training on competencies identified as necessary to confidently teach online and build online instructor self-efficacy. Because instructor online teaching self-
efficacy is important for supporting the growth of online courses, these barriers need to be addressed.

**Barriers and Attitudes**

With psychological states identified as a source of self-efficacy, it is important to address these states as possible barriers and attitudes with respect to online teaching. Apprehension and animosity towards the online teaching environment are psychological states that inhibit online teaching self-efficacy (Bingol et al., 2019; Tschannen-Moran & McMaster, 2009). Apprehension is inclusive of unfamiliarity with the online learning environment, online teaching pedagogy and technology, and perceived inadequate institutional support for online instructors. Animosity toward online learning also relates to perceptions of insufficient learning experiences (Martin et al., 2019). Understanding these states will help diminish barriers and discomfort with teaching online.

Several studies consider these barriers and provide insight to overcoming them. Apprehension regarding online teaching is often a result of unmet training needs and insufficient institutional support for online instructors (Corry & Stella, 2018; Northcote et al., 2015). Lloyd et al. (2012) examined the gap between the demand for online education and limited instructors choosing to engage in online teaching. Surveying 75 participants, these researchers discussed key barriers to online teaching, including institutional barriers, training and technology, interpersonal factors, and cost/benefit assessments, which all impacted faculty attitudes. Institutional barriers included acknowledging the increased workload for teaching online as well as offering the required additional training regarding the delivery of courses online and navigating the technology related to online courses. Those who had the least experience with online education
found that their barriers were greater, and any type of experience in teaching online led to reduced perceptions of barriers. Reducing barriers may require experience teaching online. However, there is strong resistance to embracing online teaching as a legitimate modality for delivering education (Jaschik & Lederman, 2019). Chiasson et al.'s (2015) research study on successes and failures of moving face-to-face courses to online further support findings that specify minimal online teaching training and increased demand on time as barriers to online teaching adoption.

These barriers have an adverse effect on the psychological state of the instructor and their perceptions of self-efficacy for online teaching. Affirmative attitudes on technology training can contribute to increased online teaching self-efficacy. Alanzy (2017) researched positive attitudes regarding online teaching technology. Participants ($N=156$) in this study completed a web-based questionnaire with the results revealing that experience and exposure to online learning had an effect on the positive attitudes toward online teaching. These studies demonstrate how experience in the online teaching platform, as the instructors build mastery experience, contributes to increased online teaching self-efficacy.

Animosity towards online teaching is another significant barrier for instructors. Glass (2017) stated that the growth of online programs is limited by faculty members who “do not accept the value or legitimacy of online education” (p. 239) and focused on identifying themes in faculty attitudes regarding online teaching. For Glass' study, the views of the 35 instructors were surveyed using the interpersonal relationships involved in the participants’ goal pursuits and how they related to their perceptions of online education. Some found that online courses could be a canvas to create on, while others found it stifling and limiting in the faculty member’s ability to
create. Faculty struggled with the inability to gauge student responses, while others described feeling more connected to students since they seemed to be more candid on the discussion boards. This research identified that faculty attitudes are affected by not only the quality of online learning but also the quality of the faculty member’s experience in expressing their content and performing perceived necessary social roles for education. These concerns can be addressed with course design elements.

Instructor attitudes toward online teaching and learning are determined by their ability to effectively design an online course and their ability to perform social value roles in the online courses (Glass, 2017; Martin et al., 2019). Proposed solutions to these issues include workshops encouraging instructors to share online teaching experiences or foster conversation regarding online teaching successes and challenges. A study by Walters et al. (2021) further supports the need for workshops and professional development programs to break down online teaching barriers. Their study examined faculty experiences with issues related to online teaching, including their perceptions of and satisfaction with online teaching, arguing that awareness of these attitudes can shape the content for faculty development programs.

Overall, research reveals that barriers to teaching online in higher education include unfamiliarity with the pedagogy, technology apprehension, and resistance to online teaching methods (Shea, 2007; Tondeur et al., 2017). Understanding the barriers instructors feel with respect to online teaching can help online teaching advocates work towards eliminating those negative attitudes that adversely impact psychological states and inhibit mastery experience opportunities.

**Effective Course Design**
Barriers and attitudes to online teaching heavily focus on apprehension, indicating the need for training focused on online teaching pedagogy and technology, institutional support of time commitments involved in teaching online, and addressed concerns regarding student engagement and adequate learning opportunities. “Instructional design helps faculty understand the various pedagogies that can be used to help students learn, and different ways of using technologies to implement these pedagogies” (Meyer, 2013, p. 3). Meyer goes on to promote that learning from faculty who have learned to teach online provides a support structure for novice online instructors. Varvel (2007) described that planning instruction with course objectives, assessments, and activities that align with those objectives, and knowing online pedagogy’s application to course design requires significant effort. Understanding course design best practices can address the apprehension toward online teaching.

Designing an online course requires increased technical competence and persistence through technical challenges while learning new teaching best practices (Chiasson et al., 2015; Visser, 2000). Educators who transitioned from face-to-face courses to online courses desired more professional development with focus on technology and online course design (Martin et al., 2019; Zheng, 2015). The stress on the time required for online course design paired with apprehension regarding instructional technology can inhibit the instructor’s willingness to teach online. Training on best practices in course design can help alleviate apprehension while presenting instructors with proven strategies for success.

Design practices that are effective for student success are course design best practices. Course structure and organization are major contributors to student achievement in online courses (Darabi et al., 2006; Ko & Rossen, 2017). Specific best practices include organization
and ease of navigation within the LMS, clarity and alignment between learning objectives, course activities, and course assessments, opportunity for diverse interpersonal interaction, and purposeful use of technology (Jaggars & Xu, 2016). Course design elements that are effective in improving student achievement include the use of learning resources, instructor feedback, online tools, and clear communication (Lockman & Schrimer, 2020).

Lockman and Schrimer’s (2020) research into course design elements support Quality Matters’ standards for quality course design. The Quality Matters program employs a rigorous rubric to assess the quality of a course. This 42-item Quality Matters Higher Education Rubric, Sixth Edition is based on best practices in online course design and is supported by research literature. The rubric reinforces key ideas such as course organization and navigation, clear explanations on course materials and assessments, connections between course objectives and assessments, interaction opportunities that contribute to student learning, and relevant instructional materials and technology tools (Hixon et al., 2015). Kearns and Mancilla (2017) also studied Quality Matters’ impact on faculty perceptions of online teaching (N=1,429) and found that workshop graduates walked away with a greater awareness of alignment regarding course objectives, activities, and assessment, communication clarity for online courses, and general online course operability. “When faculty are trained and quality elements (as defined by QM standards) are built into the design of a course students derive a high-quality experience that may result in increased satisfaction, learning, and retention” (Hixon et al., 2015, p. 30). These studies demonstrate how QM’s approach addresses some of the apprehension instructors may feel about teaching online.

**Instructor Readiness to Teach Online**
Online instructor teaching readiness can be defined as the state of faculty preparation, which includes perceptions of faculty readiness for online instruction and institutional support to faculty for meeting online teaching requirements (Bao, 2020; Martin et al., 2019; Rapanta et al., 2020; Sherer et al., 2021). This may include faculty perceptions of future oriented tasks and their knowledge and skills concerning teaching online, which can manifest through their sense of self-efficacy (Tschannen-Moran et al., 1998). Identifying competencies for online teaching readiness can provide a window into how to best support online teaching self-efficacy.

Lichoro (2015) found that faculty do not feel prepared for online teaching; however, this may be related to the limited research regarding the key competencies required for preparing faculty to teach online. Competencies for online teaching readiness were researched by Gausch et al. (2010) who determined that additional research is needed to define the relationships between attitude, ability, and online teaching readiness. These studies demonstrate that the key competencies for online teaching readiness, as well as online teaching self-efficacy, are still emerging. Martin et al. (2019) wrote that there were very few studies regarding faculty readiness for online teaching, arguing that faculty needed pathways to help them be prepared to teach online. Martin et al. (2019) looked at U.S. and German perceptions on preparedness to teach online as well as perceptions on key competencies to teach online and self-efficacy regarding those competencies. Results corroborated that self-efficacy regarding teaching online was strongly related to experience. Course design, course communication, and technology aptitude were also related to years of experience. Mastery of these competencies could lead to an increase in confidence and an increase in online teaching self-efficacy. The shift in confidence for online teaching occurs at approximately five years of experience (Martin et al., 2019); because of the
lack of formal education, faculty are primarily relying on experience to acquire the necessary skills. This highlights the issue of building online teaching self-efficacy without relying on time. By breaking down barriers and increasing willingness to teach online, instructors may be able to gain those experiences faster.

**Lessons Learned from the Pandemic’s Impact on Higher Education**

Instructor online teaching readiness, or lack of it, was made prevalent during the emergency transition to online instruction in Spring 2020. This is alarming considering the steadily increasing demand for online learning before Spring 2020. Arguably, this is a reflection of the general hesitancy for many in higher education to adopt online teaching practices, as many professionals were unprepared and lacked the capabilities to teach online. While research for this period is ongoing, initial reports strongly advocate for increased professional development opportunities specific to online teaching and learning.

Steward et al. (2021) conducted a survey among graduate schools within the United States and found that a majority of institutions were not fully capable of providing online teaching before the pandemic. This related to the necessary technologies, resources, and educators needed to provide scalable online education. Bao (2020) found that most institutions had limited time to provide online materials, technologies, and pedagogical support for the move to online only instruction during the pandemic. This limitation, paired with pre-established negative attitudes and perceptions regarding competencies for teaching online (Klassen & Tse, 2014; Tondeur et al., 2019), contributed to the instructor’s negative perceptions of online instruction during this time period (Bao, 2020). Initial studies determined that those with low online teaching self-efficacy who entered the emergency transition to online instruction reported little satisfaction
with their work environment and institutional support (Bao, 2020; Sherer et al., 2020). Teachers who entered Spring 2020 with high online teaching self-efficacy, those with online teaching experience, reported more positive experiences teaching online and satisfaction with institutional support (Bao, 2020). This identifies a relationship between online teaching self-efficacy and perceived institutional support through afforded resources and opportunities. There is increased support for addressing both developing resources for online teaching as well as increasing online teaching readiness programs to support online instructors (Bao, 2020; Sherer et al., 2020).

Many factors contributed to the challenges of emergency remote instruction. Instructors who participated in online professional development seminars for online teaching had higher online teaching self-efficacy scores at the start of Spring 2020 and increased persistence during the transition (Dolighan & Owen, 2020; Hofer et al., 2021). Those who were threatened by the transition suffered from burnout quicker and set limited goals for the semester (Hoef et al., 2021). Walters et al. (2021) found that in the Spring of 2020, professional development opportunities to help instructors move online were better received by those who had more years of experience teaching online. They also confirmed an older study that identified that inexperience with online pedagogy was a demotivating factor for online teaching (Shea, 2007; Walters et al., 2021). This supports the need for online programs to focus resources for online teaching to faculty who are new to online teaching.

Resources for online teaching and professional learning can help instructors who are making the move to online teaching. It is important to invest in online teaching training and support for instructors at institutions of higher education to offset the shock of emergency response efforts (Damsa et al., 2020). Ma et al. (2020) also argue that instructors need to be
equipped with the skills necessary to cope with unexpected changes due to crises and disasters, advocating that online teaching pedagogies should be part of all teacher professional development programs. Rapanta et al. (2021) study of lessons learned due to the pandemic resulted in the recommendation that online teaching will continue to be an essential part of higher education; therefore, institutions need to invest in professional development opportunities that teach effective online instruction competencies to ensure instructors can proficiently teach in the online environment.

**Instructor Development**

**Building Instructor Self-Efficacy with Professional Development**

Looking at the barriers to online teaching adoption supports improving instructor self-efficacy for online education. Reflection affects a person’s efficacy of their perceptions and judgements with negative perceptions and judgements arising from poor or limited information (Haviland et al., 2010). Furthermore, faculty training needs to transparently address sources of online teaching self-efficacy. The most effective source of self-efficacy is mastery experience; however, three other sources exist and a focus on these three sources during professional development may contribute to boosting online teaching self-efficacy. Educators would benefit from placement in online teaching and learning environments that harness and grow their online teaching self-efficacy. Professional development delivered online is beneficial in developing online teaching self-efficacy (Chai et al., 2010, Moore-Adams & Jones, 2015; Wright, 2011). This includes courses that promote research-based instructional design practices and testimonials from other professors to reduce skepticism and promote positive student outcomes.
Gosselin et al. (2016) conducted a mixed methods research study to identify the professional learning needs of academic staff to build a tailor-made program for online teachers and their self-efficacy. The mixed-methods approach took data collection procedures that included a reflective journal, interviews, a self-report questionnaire, and the Online Teaching Self-Efficacy Inventory instrument by 38 participants. Results of the data indicated that the capacity to design and teach online is influenced by factors such as understanding of the institutional support available to instructors, student learning outcomes, confidence in course design, confidence in course delivery, and positive perceptions of student learning. The research found that engaging in online education, participating in professional training workshops, and collaborating with colleagues greatly contribute to self-confidence.

One way to change online instructors' perceptions and attitudes is to engage them in professional development opportunities that can demonstrate the benefits of online teaching and learning through modeling (Borup & Evmenova, 2019). Additionally, teacher professional development can support internal changes in attitudes, knowledge, and beliefs (Dolighan & Owen, 2020; Noben et al., 2021). Fortunately, prior research has found that professional development can increase teaching self-efficacy as the assumption is teachers who feel more confident in their teaching competencies will focus on improving those competencies (Ibrahim et al., 2020; Pekkarinen & Hirsto, 2017; Tenzin et al., 2019). Critical reflection during learning may be helpful to faculty developers who are trying to change perspectives about online teaching, online student learning, and instructor roles. (Meyer, 2013). Therefore, professional development can be a tool used to help break down barriers and influence perceptions, supporting online educators and their professional growth.
Professional Development Areas for Improvement

Higher education institutions need to schedule training exercises for instructors to promote the growing skills needed for online teaching (Meyer & Murrel, 2014). However, online faculty are not typically satisfied with their professional development experiences (Bolliger et al., 2014) because the professional development is often not related to the individual’s teaching goals (Kang, 2012; Wingo et al., 2016). Professional development is most effective when the participants can practice modeling the behaviors they observe (Gosselin, 2016) because peer modeling can impact class motivations and behaviors (Bandura & Kupers, 1964). Unfortunately, few professional development opportunities model best practices in online teaching and learning (Meyer & Murrel, 2014).

Online faculty have specialized professional development needs, which include technology training. Without effective training, instructors will not be able to fully support their online learners (Grabowski et al., 2016). Northcote et al. (2015) found that a multi-faceted professional development workshop that focuses on developing online teaching abilities and pedagogy empowers teachers in their design and delivery of online teaching.

Research shows that professional development focused on verbal persuasion and vicarious experiences are minimally effective if the participant does not have the opportunity to implement lessons and receive feedback and support from the facilitators (Guskey, 1989; Tschannen-Moran & McMaster, 2009; Stein & Wang, 1988). In-workshop opportunities for mastery as well as continued support post workshop led to increased self-efficacy as participants who are able to manipulate virtual classrooms found increased instructor confidence and online teaching self-efficacy (Berry, 2019). Effective professional development is content focused,
incorporates active learning, supports collaboration, uses models of effective practices, provides coaching, and offers feedback (An, 2018).

Once faculty successfully teach online, their perceptions of online learning change, and they begin to believe in the legitimacy of online education (Martin et al., 2009; Pererra et al., 2019; Tschannen-Moran & McMaster, 2009). A potential solution becomes exposing faculty members to online learning as well as developing professional development programs with a curriculum built around leveraging Bandura’s four sources of self-efficacy: performance accomplishment, vicarious experience, verbal persuasion, and psychological responses. That professional development program should also consider the established key competencies labeled essential for online instruction as mastery of these competencies also contributes to increased self-efficacy. The increased confidence in teaching online and support for the legitimacy of online learning will afford emergency planners the ability to ensure quality online learning is an option in contingency planning efforts. This will also support the demand for increased online courses. In alignment with the purpose of this study, QM offers a professional development workshop that offers these effective professional development tools of modeling behavior and constructive peer interaction. This workshop is focused on online pedagogies and best practices for online course design and facilitated by a subject matter expert in online course design and delivery.

**Conclusions and Recommendations**

There is a continued need for online learning. This is demonstrated by student demand. However, some faculty attitudes present a potential barrier to the development and delivery of quality online courses. Based on the research, exposure to the online environment plays a major
role in breaking down barriers for those who are skeptical of online education (Lloyd et al., 2012; Glass, 2017; Chiasson et al., 2015). Additionally, faculty readiness to teach online is influenced by many factors, specifically competencies that help build confidence (Martin et al., 2019; Viberg et al., 2019). In order to encourage faculty to teach online, a focus on their online teaching self-efficacy can serve as the bridge between hesitancy and adoption.

Although research in faculty perspectives of online learning is extensive, studies regarding the 2020 pandemic semester will greatly contribute to this body of knowledge. Considerations need to be made for the difference in emergency remote education and thoroughly designed and carefully executed online courses. Additional research could relate these online teaching core competencies to self-efficacy sources, and training programs can be developed to train and equip faculty to successfully teach online.
CHAPTER THREE: METHODOLOGY

The Investigation Plan

The research method, data collection procedures, and data analysis plan are described in this chapter. It will conclude with an explanation of the rigor and ethical considerations employed.

This qualitative study used an explanatory case study design (Yin, 2018) to discover how, if at all, experiences during the APPQMR workshop contributed to participant’s online teaching self-efficacy. Case studies are appropriate for understanding an online instructor’s environment (Denzin & Lincoln, 2011). Areas to consider in assessing online teaching self-efficacy include online teaching attitudes and perspectives, knowledge for teaching online, belief in instructor abilities to create meaningful online environments, and overcoming online teaching challenges. Consistent with the aim of this study, this qualitative case study focused on participant interpretations of their experiences and sought to understand how they engaged in making meaning of the world through inductive processes (Creswell & Creswell 2018; Patton, 2015). Yin (1984) and Stake (1995) promote approaching case studies pragmatically, using theory in practice, and creating meaning without eliminating objectivity. Thus, this case study engaged a pragmatic view of making meaning through observing theory in practice, focusing on the practical implications of research and allowing for the identification of “what works” (Creswell, 2013, p. 28). This design looked at how online teaching self-efficacy was formed through participants’ descriptions of their experiences in the APPQMR workshop. Explicitly, this study used an explanatory case study as this design addresses the how and why questions in research.
The insights learned from this case study can be used to support online teaching professional development initiatives at post-secondary institutions.

Case studies focus on insight, discovery, and interpretation (Merriam, 1998). At the same time, limits, or bounds to a case, are critical to its design as it aids in building connections to the research questions. The data collection leads to the bounded system becoming the case and the unit of analysis (Yin, 2018). The phenomenon in this case study, online teaching self-efficacy, was bound by the specificity in the APPQMR workshop, the participants from that workshop, and the single site used as the setting. The case and unit of analysis became participants' perceptions of online teaching self-efficacy.

Threats to case studies include construct validity, internal validity, external validity, and reliability (Yin, 2018). Ensuring validity and reliability in qualitative studies means observing ethical considerations (Merriam, 1998). Construct validity is ensured through data collection methods that employ triangulation and participant confirmation (Merriam, 1998; Yin, 2018). Internal validity is a primary concern with explanatory case studies but can be offset with appropriate data analysis techniques (Yin, 2018). External validity relates to the study’s generalizability (Yin, 2018). Cases are opportunities to discover empirical data that will contribute to theoretical concepts and principles. Research questions will lend themselves to analytic generalizations so that the interpretation of the study can be easily ingested by the reader. Adhering to a clearly defined case study protocol and case study data base ensures reliability in the research methodology (Yin, 2018). The threats specifically related to this research are addressed in the data collection and data analysis sections of this chapter.
Participants

Participants for this study were selected using purposeful sampling (Merriam, 1998). Purposeful sampling allowed for deliberate selection of settings, individuals, and activities (Maxwell, 2005). Because of the selection criteria for this study, the list of qualified participants was limited. Regardless, the data proved to be rich and specific to the bounds of the case, which aligned with the research design and purpose.

Purposeful sampling also produces information-rich cases from relatively small samples (Patton, 2015). The selection criteria were as follows: participants must be a graduate or Spring 2022 participant of the site’s virtual APPQMR workshop, must currently teach a higher education course online, and have the freedom to design their online course. This criterion presents insight into the participant’s experiences of the phenomenon. Workshops provided case study participants, with each workshop hosting six to eight participants, yielding 24-32 potential participants. Workshop registration is voluntary; therefore, participants willingly registered for the course on their own accord. The Spring 2022 virtual workshop presented an opportunity to obtain observation data. The course design criterion is important as this study worked to understand how a professional development workshop on course design may or may not contribute to online teaching self-efficacy. Since the virtual workshop offerings began in Spring 2020, participants included graduates over the past two years. A range of participant graduation dates provided a deeper understanding of the phenomenon as it varied the time between the workshop and application of the new knowledge gained. Instructors of hybrid courses were not considered as the focus of this study is online teaching.
Unfortunately, research is inconsistent on a specific recommended sample size for a case study. Due to the exploratory and inductive nature of case studies, this is not surprising. This research sought to understand the depth as opposed to the breadth of an experience. The validity, or meaningfulness, of a qualitative study is related to the richness of the case (Patton, 2015), which would also support pursuing understanding the depth of a case. Finally, because qualitative research is not meant to generalize findings to individuals, sites, or places (Gibbs, 2007), a strict sample size becomes difficult to mandate. Patton (2015) argues that qualitative inquiry means there are no rules concerning sample size. The estimated pool of participants for this study was approximately 24-32 participants. Small sample sizes with in-depth analysis have historically provided significant insights into the phenomenon. For example, Piaget’s major contributions to learning considered two children, and Freud’s contributions to psychoanalysis were based on his clientele of fewer than ten patients (Patton, 2015). With this in mind, the initial goal sample size for this study was five-ten participants. The actual yield was, five interviews and a workshop where six participants were observed. Two of the observed participants were also interview participants (Andrew and Nicolle). The other four observed participants did not sign consent forms but were notified that their workshop would be observed upon registration and were given the option to register for a different workshop at a later date. These four participants are not discussed individually; however, collective general observations are described in this document.

Participants were recruited over a two-week period via a series of e-mails to all graduates of the virtual APPQMR workshop who met selection criteria. A list of virtual APPQMR graduates was constructed by the site’s QM coordinator, who was also the workshop facilitator.
The e-mail provided detailed background information about the researcher, the purpose of the study, the time commitment, selection criteria for the study, and closed with asking for volunteers for participation, see Appendix A for a copy of the e-mail. The QM coordinator, who had access to instructor course information, verified that respondents taught an online course. Participants of the most recent virtual workshop were given priority to collect workshop reflections close to workshop completion. All workshops were instructed by the same facilitator, on the same platform, and under the same format and agenda.

This study did not differentiate between part-time and full-time instructors as both have equal access to online teaching support and QM resources. If the part-time instructor taught a master course and could not alter the course design, that instructor was excluded from the study. This exclusion occurred because this study intended to understand how, if at all, this design-focused workshop cultivated online teaching self-efficacy.

Finally, to protect the identity of the participants, pseudonyms replaced actual names in the research report. In addition to protecting participant identity, additional considerations in this case study included gaining informed consent and being mindful of equity when considering interview candidates (Yin, 2018).

**Setting**

The site of the research was a publicly funded 4-year, primarily non-residential, institution of higher education in a city of approximately 100,000 citizens near a large military installation. The institution is accredited through The Southern Association of Colleges and Schools Commission on Colleges and is in the Southeast United States. The approximate student population is 10,000 full-time equivalency (FTE), and the student to faculty ratio is 18:1. The
number of full-time faculty is 371, while the number of part-time faculty is 323. The institution offers 407 associates, 1,517 bachelors, 403 masters, one doctoral, and 21 post-graduate certificate programs.

Approximately 94% of students who graduate have taken at least one online or hybrid course; this often includes the mandatory freshman seminar. In the 2018-2019 school year, 1801 of the 5931 courses offered were online only. In the past three years, the institution’s incoming freshmen cohort reported an average of 17% as online-only students. In Spring 2020, the institution offered all courses fully online, and for Fall 2020, the institution offered in person courses at reduced capacity, maximizing the online environment for most classes.

Online teaching professional development is available to all instructors at the institution. Upon hire as part-time or full-time faculty, new instructors are given an LMS workshop, an introduction to available instructional technologies, and a seminar in best practices for teaching online. These trainings typically last 60-90 minutes and occur at the beginning of the semester. Professional development courses are provided in-person and are also available any time through the reference courses in the LMS. All instructors are also granted access to their online courses at a minimum of 30 days before the start of the term. In addition, a team of distance education professionals is accessible to all instructors at the institution to provide support with the LMS, instructional technologies, and course design.

One of the online professional development opportunities available to all instructors is access to Quality Matters and its membership benefits. The Distance Education department pays for the QM membership as well as the workshops offered by the organization. At the institution, the APPQMR workshop is offered in several ways; via a two-day workshop facilitated virtually,
a two-day workshop facilitated in person, or a 10-day online course with a Quality Matters appointed facilitator. These latter two workshops were excluded from this case study to ensure conformity in the study’s setting and further bound the study. While the content is the same for the workshops, the facilitator for the online course is not affiliated with the institution. Removing this factor can help ensure consistency. Also, because of the pandemic, the most recent APPQMR workshops have only been offered virtually. This will help ensure participants have recently undergone the training and reduce time’s effect on reliability of the data being collected as participants seek to recollect their experiences in the workshop. The study only considered workshops delivered via web conferencing software, specifically Zoom, and facilitated by the institution’s QM coordinator.

The virtual workshop spans eight hours, occurring on two consecutive days at four-hour increments. Participants must attend both days to earn a certificate of completion. Participants were provided with the Quality Matters Higher Education Rubric, Sixth Edition as the “textbook” for the course and an agenda for the two-day workshop. While taught over Zoom, the workshop heavily relied on a 95 slide PowerPoint to convey content. QM’s rubric provided detailed information on eight General Standards and 23 specific review standards, which research and best practices establish as necessary for quality course design (citation needed). A public version of this rubric is available in Appendix B. The detailed rubric can only be reviewed by QM members.

The workshop heavily focused on this rubric, showing participants how to meet rubric expectations to ensure online courses are well designed. With each standard, participants analyzed the requirements and discussed how they may be employed in an online course. The
workshop also utilized a demonstration course which participants log into and review with a provided username and password. Examples were provided within this demo course of instances where rubric standards are or are not met. Participants discussed why or why not the example demonstrate quality course design. Worksheets were also distributed to the group through document sharing on the Zoom platform. These activities further reinforced the standards for quality course design. Activities were completed either as an entire group or as smaller groups through breakout sessions. Finally, at the end of the workshop, participants were given a second demo course to review. This second course was an improved version of the first demo course with necessary changes made to ensure compliance with the Quality Matters rubric. Participants discussed these improvements and the differences between the first and second demo courses. In summary, the course took eight hours to complete, reviewed 95 PowerPoint slides, contained 24 activities, and introduced a before and after online course for analysis. Emphasis was placed on group discussions, sharing experiences, and facilitator expertise.

**Data Collection Methods**

Qualitative studies seek to develop an in-depth exploration of a phenomenon where the researcher poses broad questions to gain insight unhindered by the researcher's perspective (Creswell & Creswell, 2018). This results in extensive data collection. Data collection methods must also align to and address the research questions (Creswell & Guetterman, 2019). Table 1 introduces this alignment.

Data was collected via semi-structured interviews, workshop document review, and a Spring 2022 workshop observation. These methods were all conducted online. Richness in data collection in the online platform can be achieved through synchronous methods (Daft & Lengel,
Technology influences the characteristics and feeling of an online space and media that is rich in cues is typically synchronous, as in video calls, which also allows for immediate feedback and review of non-verbal communication (Salmons, 2021). Unfamiliarity with technology usage, which can be an issue with online research, was mitigated through the use of technology the participants were already familiar with Zoom and Microsoft Office (Salmons, 2021). Choosing technology that participants are familiar with helps participants feel comfortable and reduced preparation and familiarization time with a new tool.

A major strength of a case study is the opportunity to take advantage of multiple sources of evidence that relate to the original motive for pursuing a case study, obtaining an in-depth study of a phenomenon (Yin, 2018). Obtaining data from these sources allowed for the triangulation of data which increases the reliability and validity of the findings (Yin, 2009).

Table 1

Research Question and Method Alignment

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collection Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Question:</strong> How is perceived online teaching self-efficacy influenced during the Quality Matters APPQMR workshop as faculty learn about best practices in online course design?</td>
<td>Observation, interviews, documents</td>
<td>Observations will provide insight into how participants are responding to the workshop. Interviews will provide participant perspectives. Documents will showcase materials presented to participants for knowledge acquisition.</td>
</tr>
<tr>
<td><strong>Sub-Research Question 1:</strong> How did participation in the APPQMR workshop contribute to the participant’s knowledge of teaching online?</td>
<td>Interviews, documents</td>
<td>Interviews will provide participant perspectives. Documents, specifically workshop evaluations, will</td>
</tr>
<tr>
<td>Sub-Research Question 2:</td>
<td>Observation, interviews, documents</td>
<td>Observation, interviews, specifically participant interaction with each other, may yield attitudes and perceptions. Interviews will provide participant perspectives. Documents, specifically workshop evaluations, will showcase participant reflections immediately after the workshop.</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>How did participation in the APPQMR workshop contribute to the participant’s attitude toward online learning?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Research Question 3:</td>
<td>Interviews</td>
<td>Interviews will provide participant perspectives on meaningful online learning environments.</td>
</tr>
<tr>
<td>How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to create a meaningful online learning environment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Research Question 4:</td>
<td>Interviews, observation</td>
<td>Interviews will provide participant perspectives. Observations, specifically participant interaction with each other, may yield discussion on challenges in the online classroom.</td>
</tr>
<tr>
<td>How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to overcome online teaching challenges?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Research Question 5:</td>
<td>Interviews</td>
<td>Interviews will provide participant perspectives.</td>
</tr>
<tr>
<td>What sources, if any, within the APPQMR workshop influence the participant’s belief in their ability to teach an online course?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To help with data collection, protocols were established for each type of data source, as recording data is an essential process in qualitative research and increases validity in a study.
(Creswell & Guetterman, 2019; Yin, 2018). These protocols are further elaborated under each data collection section of this chapter.

To ensure qualitative reliability, Yin (2018) encourages researchers to clearly articulate case study procedures, data collection procedures, and create a database to house all the case study materials. This effort allows other researchers to follow similar procedures in future case studies. Elaboration on the data collection procedures is discussed in this chapter.

Because qualitative research seeks in-depth descriptions, participants are often asked to discuss private details of their experiences (Creswell & Guetterman, 2019). Methods to ensure ethical considerations were made during this study included informing the participants of the purpose of the study, creating consent documents, freely sharing information with the participants, being accessible to the participants, and maintaining confidentiality (Creswell & Guetterman, 2019). Clarifying bias and the researcher's role in this study is also addressed in this chapter.

**Semi-Structured Interviews**

One-on-one and semi-structured interviews generated the primary data collected for this study. Predetermined, non-leading and open-ended questions were asked so participants could “best voice their experiences unconstrained by any perspectives of the researcher or past findings” (Creswell & Guetterman, 2019; Savin-Baden & Major, 2013). This allowed the participant to provide rich and vivid details that helped the researcher fully understand experiences and attitudes but also provided the flexibility for unexpected turns in the conversation (Denzin & Lincoln, 2000). The goal of the interviews was to help answer the research questions and understand how experiences influenced decisions, if the training resulted
in a mind shift or attitudinal change, and to discover perceived elements of importance from the training.

Considerations made for the online structure of these interviews included ensuring the participants were familiar with the technology used (Salmons, 2021). Zoom was leveraged for the interviews because after remote work from 2020, the participants were accustomed to the platform. The QM workshop was also conducted over Zoom and required participant videos to be on. Participants were informed during the solicitation e-mail that interviews would be conducted over Zoom and recorded, with video for both the participant and the interviewer required to be on. This information was also captured on the consent form, which can be found in Appendix C. There was no requirement for the interview to occur in an office to mitigate distractions. Participant availability for the interview was prioritized over the requirement for a location with minimal distractions. The participant was able to choose where to conduct the interview and the location would be based participant needs.

The virtual nature of the interviews resolved the problem of geographical distance (Creswell & Guetterman, 2019) from the research site. This also allowed for an easy medium to record the interviews. Interviews were transcribed to help with coding during analysis. The interviewee was e-mailed a transcript of the recording which was verified through member-checking. No changes were made to the transcripts.

**Interview Protocol**

Interviews were recorded and notes were taken during the conversation. Notes are useful should the recording fail to work, but they also capture immediate reflections (Creswell & Guetterman, 2019). The protocol served as a reminder of the questions while also allowing for a
space to reflect or take down pertinent information. The interview protocol can be found in Appendix D. Interview question and research question alignment can be found in Appendix E. A pilot test of the protocol was conducted as this is a helpful way to ensure quality in the final product (Creswell & Guetterman, 2019). Executing qualitative studies requires flexibility (Creswell & Creswell, 2018), making this pilot protocol an appropriate application in this case study. Key changes made after the pilot included rewriting questions seven through nine for clarity, identification of questions that might not yield intended answers, and realigning follow-up questions. The pilot was conducted with the QM coordinator who is an online instructor as well as an instructional designer well versed in self-efficacy theory.

The questions in the interview protocol were designed to explore online teaching self-efficacy within the setting of the APPQMR workshop and aligned to the research questions. Questions regarding online teaching experiences, overcoming challenges, goal setting and beliefs in goal attainment, and belief in task achievement provided details about the participant’s online teaching self-efficacy.

**Observations**

“Observation is the process of gathering open-ended information by observing people and places at the research site” (Creswell & Guetterman, 2019, p. 217). This type of data also improves the validity of a qualitative study (Bernard, 1994). The research site will be virtual for this study; therefore, the observations will be taken in a Zoom setting. I took on the role of nonparticipant observer and did not become involved in the activities, but rather recorded notes and observed quietly (Creswell & Guetterman, 2019). These observations occurred synchronously during the virtual workshop offered in the Spring 2022 semester. As the facilitator
presented the 95 slides over the two-day period, I took notes on the 24 activities participants completed, the discussions during those activities and throughout the workshop, and participant observations of the example online courses. I also used my literature review to create relevant key words, concepts, and phrases to look for during the observation period (Salmons, 2021; Stiver et al., 2015). These key words and phrases formed the beginning of my coding process for analysis and can be found in Appendix F.

During the workshop, participant videos were turned on; therefore, nonverbal cues during activities and discussions could be noted. Activities and participation typically employed the use of the microphone; however, the Zoom chat feature was also monitored. The use of video conferencing tools allows for more natural communication styles that also afforded me the opportunity to note non-verbal cues (Salmons, 2021).

Observations in this case study were unstructured as it was difficult to construct an exhaustive observation of a workshop with many participants, activities, and discussions occurring over the two-day period (Savin-Baden & Major, 2013). A disadvantage of not participating in the workshop is not having the actual experience of the participants (Creswell & Geutterman, 2019). This disadvantage is mitigated because I have attended as well as taught this workshop in the past.

Observation Protocol

Salmons (2021) recommends that when conducting online observations, a degree of structure be observed to accommodate the increased volume of activity and faster pace because of the diverse users. Field notes, or an observation protocol, are how notes are recorded during the observation period. Things considered during the observation included participation in
activities, Zoom chat, commentary on attitudes, perceptions, reflections, personal stories, and general discussion among participants. I recorded a chronology of events and included verbatim or paraphrased quotes. Field notes were descriptive and reflective (Creswell & Guetterman, 2019) so I could turn the notes into rich and vivid descriptions during analysis and interpretation. The observation protocol can be seen in Appendix G. It contains a header for recording setting information and observer role and columns for descriptive observations and reflective thoughts, hunches, and emerging themes for later analysis (Creswell & Creswell, 2018; Creswell & Guetterman, 2019).

**Documents & Digital Materials**

The digital materials reviewed were the activity worksheets, QM content related documents, supplemental materials, and the Quality Matters Higher Education Rubric, Sixth Edition which were provided to the participants during the virtual workshop. They are shared via the Zoom document share feature in the chat tool or when the facilitator is sharing their screen. Because QM is a membership organization, these documents cannot be freely shared with non-members. As a QM member, I could review the documents used in the workshop. Authenticity of the document is confirmed because they were presented during the workshop, which also guaranteed that the data collected remain within the bounds of the case.

**Document Protocol**

Due to the varying nature of the documents collected, the best way to ensure a protocol with documents is to develop an index of the documents that can serve as an index for easy application to the case study database (Yin, 2018). This document index can be found in Appendix H.
Researcher Role

As a form of interpretive research, a qualitative study uses the researcher as the main tool for data collection (Creswell & Creswell, 2018). To mitigate potential ethical and personal issues with this process, transparency in my background is required. Because I have taught online, as well as taught this virtual workshop, I need to be mindful of the ethical considerations reflected in that experience. I have also led the department that manages the Quality Matters membership and the promotion of Quality Matters workshops and its adoption at the research site. This role as department administrator for the institution ended before the data collection phase of the study, which could mitigate what Glense and Peshkin (1992) deem as “backwards research” and eliminate potentially jeopardizing roles and accuracy of information from past colleagues.

Creswell & Creswell (2018) also suggest defining how past experiences may shape interpretations. Spring 2020 left a lasting impression on my perceptions of online learning in post-secondary education. In my administrative role for online teaching and learning, I quickly noticed the challenges of a no notice shift to an online only teaching environment. Because our customer base became so large, it was difficult to provide our customers with adequate dedicated support. The perceptions, fears, and challenges with teaching online became apparent with a large faculty population, and I struggled with building not only their confidence in the online classroom, but also their basic comforts with navigating the technology to help them gain confidence in course delivery. Those experiences have shaped my views regarding online teaching and created a desire to further study online teaching self-efficacy as well as faculty perceptions regarding online teaching and learning. Because my office serviced all instructors
regardless of part-time or full-time affiliation, my experience with instructors does not differentiate between the two instructor types.

Tracy (2010) describes this type of research as “good qualitative research is relevant, timely, significant, interesting, or evocative. Worthy topics often emerge from disciplinary priorities and, therefore, are theoretically or conceptually compelling. However worthy topics just as easily grow from timely societal or personal events” (p. 840). I believe this research is both timely due to the pandemic’s impact on online teaching but also rooted in personal experiences.

I remain committed to ethical standards throughout this research process to maintain the integrity of the data and its findings. My goal is to contribute to the body of knowledge that exists regarding online teaching self-efficacy. Throughout data collection and analysis, I plan to write memos reflecting on my personal experiences and their relation to the observations and emerging themes and document how these reflections may shape data interpretation.

**Data Collection Procedures**

Data collection procedures for this study followed a strict schedule. First, IRB approval was obtained from the research site. This IRB approval can be seen in Appendix I. Upon this approval, I immediately piloted the interview protocol. After the pilot, the participation solicitation emails were sent by the QM coordinator with participants e-mailing me to indicate interest. The e-mail list was generated from the list of graduates curated by the QM coordinator. Interviews were recorded to my computer. I leveraged Zoom’s auto transcription feature then worked to edit the auto transcriptions for accuracy. As these were completed, the transcripts were
sent to the participants for verification. I also e-mailed participant data sheets at this time to collect demographic information on my participants, a copy of that can be found in Appendix J.

While interviews were occurring, I observed a virtual workshop over a two-day period in the middle of the spring semester. Workshop registrants were informed that an observer would be present at the training and given the option to attend training at a later date. During data collection, I made sure to reflect after each interview and observation day. I also used this time to organize my case study data base for easy access during analysis. This data base was stored in my school One Drive account.

See Figure 1 for a graphical representation of the case study schedule.

Figure 1

Case Study Schedule

<table>
<thead>
<tr>
<th>TASK</th>
<th>MONTH 1</th>
<th>MONTH 2</th>
<th>MONTH 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRB Approval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant Solicitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview Protocol Pilot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview Participants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshop Observation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preliminary Analysis (transcription, member checking, etc)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data storage was kept in my institution’s One Drive software. The informed consent document made participants aware that cloud storage and personal computer storage would be used for this research. This format was chosen because it offered dual factor authentication as recommended by Salmons (2021) to ensure extra protective measures while providing a failsafe for potential technology mishaps that could occur on a personal computer. Artifacts stored in this
format include informed consent forms, interview recordings, digital materials, field notes, protocols, and analysis tools. Information is shared with my faculty advisor, but this was communicated to the participant through the consent form. The study-related data will be stored for a period of two years unless otherwise directed by the research site’s information security officer.

As previously discussed, ethical considerations were considered throughout the case study. Ethical obligations in qualitative studies are integrated into the research methodology (Savin-Baden & Major, 2013). Confidentiality of the research site and the participants will be maintained. Storage of data will be kept for the purpose of the study and further studies; however, data storage will abide by appropriate rules and regulations established by the institution. Participants were given autonomy through informed consent and voluntary participation. Finally, transparency in the research process, through the case study database, allows the research and findings to be evaluated properly (Savin-Baden & Major, 2013; Yin, 2018).

Once finalized, copies of the case study will be given to the site’s IRB office, the site’s QM coordinator, and the participants. It is my hope that findings from this case study can be used to contribute to initiatives around building effective teaching and learning programs for online instructors, specifically programs focused on online teaching self-efficacy.

Analysis

The sources of data analyzed in this study included observation field notes, interview notes, and digital materials. For a qualitative study, preliminary data analysis occurs with data collection. Thus, waiting to analyze until after data collection is complete could undermine the
entire study (Merriam, 1998). Also, the inductive nature of qualitative research obliges the researcher to remain reflective throughout the study, which supports beginning analysis in conjunction with data collection. Yin (2018) further encourages writing memos throughout the data collection period as the memos become useful during coding analysis. These memos followed Yin’s suggestion of strategizing preliminary analysis by cycling through research questions, data, and initial reflections on interpretations and hunches.

Continuing with Yin’s framework for qualitative data analysis, this case study analysis pursued a ground up strategy where I poured through data (Yin, 2018). Savin-Badin and Major (2013) call this data immersion a preliminary exploratory analysis as it helps the researcher gain a “general sense of the data” (p. 243).

I initially wanted to use Qualitative Data Analysis (QDA) software to help with analysis, but once I began manipulating the data, I realized a hands-on approach would better suit my analysis style. To execute my analysis strategies, I first coded the data collected. Coding procedures included separating and labeling data to create descriptions and themes (Creswell & Guetterman, 2019). I had a preliminary idea of my codes when I considered main ideas as I was drafting my review of the literature. Emphasis was placed on the theoretical framework literature. Preliminary codes fixed in online teaching self-efficacy included; sources of self-efficacy, experience teaching online, experience taking online courses, stress management, resilience, task completion, and attitudes and perceptions regarding online teaching and learning. Appendix F showcases these preliminary thoughts that helped build categories for codes. While the preliminary codes were useful, additional codes became necessary. This coding revealed overlapping segments and patterns, which allowed me to collapse overlaps within the data until
broad themes emerged (Creswell & Guetterman, 2019). This evolution of the coding process can be seen in Appendix K. These codes also began to reveal preliminary themes that began to align with the research questions posed by this study.

I chose to code transcripts and field notes with color coded highlighters. Colors were associated with revealed codes. I took these highlighted segments of data and inputted them into excel sheets to help with categorization, then poured over those separated data elements to identify key themes. I also took answers to interview questions from each participant and compared how those were coded to identify themes revealed with each question. Field notes, an excerpt of which can be found in Appendix L, were also highlighted using the same color-coding method, and these segments of data were also input into the excel document.

After coding, the information was compressed and combined to communicate meaning through descriptive strategies. Savin-Baden and Major (2013) describe that codes develop into categories that then turned into themes which become the governing ideas in the data. This process turned the data into meaningful chunks for interpretation. Once coding was complete, I took those meaningful segments and used a layered analysis process (Creswell & Creswell, 2018; Merriam, 1998). I took codes that were the same color and rearranged them together, eliminating repeats and redundancies. This is shown in Appendix M. This process means layering analysis first through codes that yield descriptive data and basic information, then assessing a secondary layer with analysis steps focused on revealed themes more associated with the research questions. The results of this process can be found in Appendix N. These themes and findings are further discussed in Chapter Four. Descriptive coding summarizes and describes the data, while analytical coding reveals meaning behind the data (Savin-Baden & Major, 2013).
Descriptive analysis is beneficial to case study research as it provides rich and vivid details about the case. This type of description strengthens the case’s transferability, or external validity (Lincoln & Guba, 1985). Analytical coding that produces themes became critical to data interpretation and making connections to the research questions.

Multiple data sources were used to develop these codes and themes; therefore, the study uses triangulation to strengthen research validity (Savin Baden & Major, 2013). Member-checking was executed by having participants review the transcripts from their interviews. (Creswell & Guetterman, 2019). Memos and reflections during data collection and analysis addressed researcher biases as it keeps the me aware of how personal perceptions and experiences influences analysis.

Additional validity and reliability considerations are made before analysis. These considerations are woven into the research methodology. To reiterate, internal validity was achieved through data triangulation both for collection and analysis as well as member checks of the interviews. Reliability is supported through triangulation. Reliability is also demonstrated through the rich and clear descriptions of the research methodology and the theory underlying the study (Savin-Baden & Major, 2013).

The theoretical framework for this study, online teaching self-efficacy, forms the groundwork for analytic generalizations. Additionally, the exploration of themes is rooted in the research questions. Yin (2018) advocates for exhaustively covering research questions with data analysis. Similarly, Merriam (1998) poses that the goal of qualitative data analysis is to find meaning in the data in order to answer the research questions. The relationship between the research question and analysis is presented in Table 2.
### Table 2

*Research Question and Analysis Alignment*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collection Method</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Question:</strong> How is perceived online teaching self-efficacy influenced during the Quality Matters APPQMR workshop as faculty learn about best practices in online course design?</td>
<td>Observation, interviews, documents</td>
<td>Thematic analysis, descriptive analysis, explanatory pattern building</td>
</tr>
<tr>
<td><strong>Sub-Research Question 1.</strong> How did participation in the APPQMR workshop contribute to the participant’s knowledge of teaching online?</td>
<td>Interviews, documents</td>
<td>Thematic analysis</td>
</tr>
<tr>
<td><strong>Sub-Research Question 2.</strong> How did participation in the APPQMR workshop contribute to the participant’s attitude toward online learning?</td>
<td>Observation, interviews, documents</td>
<td>Thematic analysis</td>
</tr>
<tr>
<td><strong>Sub-Research Question 3.</strong> How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to create a meaningful online learning environment?</td>
<td>Observation, interviews, documents</td>
<td>Thematic analysis, explanatory pattern building</td>
</tr>
<tr>
<td><strong>Sub-Research Question 4:</strong> How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to overcome online teaching challenges?</td>
<td>Interviews, observation</td>
<td>Thematic analysis, explanatory pattern building</td>
</tr>
</tbody>
</table>
Sub Research Question 5: What sources, if any, within the APPQMR workshop influence the participant’s belief in their ability to teach an online course?

| Interviews | Thematic analysis |
CHAPTER FOUR: RESULTS

Growth in online learning enrollment necessitates support for online teaching and learning professionals. As discussed in Chapter Two, barriers may exist that prevent these professionals from enthusiastically adopting online teaching and learning as a suitable teaching modality in higher education. Identifying perceptions of online teaching and learning and addressing barriers provides avenues for tailoring support for online educators. One way to tailor support for online educators is through enhancing their online teaching self-efficacy, specifically through professional development programs. Online teaching self-efficacy is an instructor’s perceived ability to accomplish online teaching tasks (Tschannen-Moran et al., 2001). It is a trait that can be leveraged by online educators to create effective online courses that meet the increasing demands of online enrollment. The purpose of this study is to investigate how, if at all, online teaching self-efficacy is developed because of the QM APPQMR virtual workshop. While the workshop is focused on QM’s standards for quality course design, the case study worked to identify if the professional development on course design also led to an impact on online teaching self-efficacy. This chapter presents results of the data collection methods to establish research findings. Data was collected through an observation of the virtual workshop, a review of the documents presented during the workshop, interviews with workshop graduates, and a review of researcher reflection memos. Data analysis revealed four key themes; knowledge gained, importance of student perspectives, online teaching attitudes, and striving for quality online course design and instruction, in relation to the study’s purpose and research questions.
Participant Description

Five participants were interviewed for this case study, and a summary of participant details can be found in Table 3. In-depth introductions follow the table. Real names were replaced with pseudonyms to maintain confidentiality.

Table 3

Participant Demographics

<table>
<thead>
<tr>
<th>Name*</th>
<th>Gender</th>
<th>Years Teaching Experience (years online)</th>
<th>Department</th>
<th>Modality Taught</th>
<th>Classification</th>
<th>Workshop Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corey</td>
<td>Male</td>
<td>10 (8)</td>
<td>Education</td>
<td>Online, hybrid, face-to-face</td>
<td>Assistant Professor</td>
<td>Spring 2022 (January)**</td>
</tr>
<tr>
<td>Amanda</td>
<td>Female</td>
<td>4 (3)</td>
<td>General Studies</td>
<td>Online, hybrid, face-to-face</td>
<td>Adjunct Instructor</td>
<td>Fall 2020 (December)</td>
</tr>
<tr>
<td>Christina</td>
<td>Female</td>
<td>3 (3)</td>
<td>General Studies</td>
<td>Online, hybrid, face-to-face</td>
<td>Adjunct Instructor</td>
<td>Spring 2022 (January)</td>
</tr>
<tr>
<td>Andrew</td>
<td>Male</td>
<td>2 (2)</td>
<td>Management and Marketing</td>
<td>Online, hybrid, face-to-face</td>
<td>Instructor</td>
<td>Spring 2022 (March)</td>
</tr>
<tr>
<td>Nicolle</td>
<td>Female</td>
<td>5 (3)</td>
<td>Communications</td>
<td>Online, hybrid, face-to-face</td>
<td>Assistant Professor</td>
<td>Spring 2022 (March)**</td>
</tr>
</tbody>
</table>

*Pseudonyms used

**Second time taking the workshop

Corey
Corey is an Assistant Professor in the College of Education. He works with diverse populations of pre-service teachers, public school students, and out-of-school youths. Corey has taught literature and writing courses for teacher candidates as well as teaching methods and education courses for pre-service teachers. His current research focus is on discovering ways to encourage and support teachers to be culturally relevant and uncovering ways to develop new culturally sustaining pedagogies. Corey first took the workshop in the Fall of 2020 and then again in January 2022 because he wanted a refresh on the content. He stated that he consistently works toward improving his online courses based on experience and best practices in the field. He strongly believes in being a reflective practitioner and sees professional development as a means of reflection. The workshop is a way to reinforce his beliefs that he is successfully executing his online courses. Corey has extensive experience teaching online and has taught a variety of courses online for the past 10 years. This second experience with the workshop had him reconsidering the types of activities he employed in his courses, and he is seeking to reduce graded assessments to encourage motivational learning. Corey walked away from this second workshop confident in his online teaching abilities and with a gained understanding of the experience, resources, and professionalism within the Distance Education department at the institution.

Amanda

Amanda is an adjunct instructor who teaches because she enjoys the structure and logic that comes with teaching online. She can plan an online course ahead of time while focusing on her main job as university staff. Additionally, she enjoys that teaching online affords her flexibility in her schedule. At the time of our interview, in person courses had been cancelled due
to winter weather, but her online course was not affected. Amanda teaches a freshman seminar course for the institution and a supplementary course for students who are struggling to meet the demands of higher education. Amanda is a self-proclaimed “professional development junkie” and actively seeks out opportunities to learn. She said the workshop was not necessarily revolutionary, but it presented common sense content in a clear, organized, and easily ingestible way. Amanda most appreciated that the workshop gave her the student perspective and taught her how to view the activities and content in her class with students in mind. She realized that some of her students might not be motivated to follow through with their online class because of unclear directions upon initially logging into the course. After taking the workshop, Amanda went back to past classes and identified what could be improved. Improvements she made included adjusting learning objectives to make sure they were measurable and precise. She also worked to clearly display these objectives in every learning module. Alignment among objectives and activities became a bigger focus for Amanda after the workshop. Although now in higher education, Amanda has a K-12 background. According to Amanda, the keen emphasis on lesson planning in K-12 made taking the workshop exciting and easy to apply. “My background is in K-12 education, so that’s kind of what I started out doing so like lesson planning, and you know instruction and all of that comes naturally to me.” She says one of her biggest challenges with online teaching is the mass numbers of students in a course and learning how to better organize her course to accommodate these numbers. Amanda found the discussion during the workshop to be extremely helpful as she was able to hear how others employed various standards from the rubric in their courses and could implement those strategies herself.

Christina
Christina has been an adjunct instructor for three years and teaches online because she likes the freedom and flexibility of teaching online as it also allows her to focus on her main job as university staff. She likes being able to plan the course ahead of time and focus on student questions and concerns during the semester. She also enjoys supporting students who, due to various life circumstances, rely on online learning to obtain a degree. Like Amanda, Christina teaches a freshman seminar course for the institution and a supplementary course for students who are struggling to meet the demands of higher education. She took the workshop because she wanted to figure out how to assess her online teaching performance and identify ways to improve. She stated that her main takeaway from the workshop was the differences between teaching online and face-to-face instruction, learning that you cannot just take a face-to-face class and put it online and identifying that many activities need to be adapted for online learning. She quickly identified the importance in remembering that online teaching does not have to be the same, it just must be fair. Christina frequently mentioned the concept of fairness for online students; referencing that fair means that the student still receives a quality and engaging course. She took the workshop in January 2022 and did not have time to make changes to her spring class; but has lofty goals for changes over the summer to be implemented in the Fall of 2022. These changes include showcasing the alignment between objectives and activities to the students so that they better understand why they are being asked to do something. The workshop also changed the way she saw online student learning. She recognized that some of her views may have been antiquated and she is excited to implement new online teaching pedagogies to create an exciting online learning environment. She noticed that most institutions do not teach
their instructors how to teach online and found significant value in this workshop’s role in helping her understand how online education.

**Andrew**

Andrew is an instructor in the College of Business, specifically focused on courses in Management and Marketing. He teaches classes on human resources and organizational behavior. He has two years of teaching experience and spent his first year of teaching as a graduate student in the Spring of 2020. The transition to fully online education left a lasting impression on Andrew as he had to quickly navigate moving a 200 student Intro to Management course from face-to-face to online at his previous institution as he also worked to finish his graduate degree. Andrew prefers to teach face-to-face courses but also has to teach at least one online course during the semester. When asked what he enjoys about online teaching, Andrew took a long pause before answering, but noted that he appreciates the flexibility online teaching offers and recognizes the role online learning plays for many students who may not be able to attend classes in person. As a result, his goals are to ensure his students receive a quality and engaging online course. Andrew took the workshop because it was strongly recommended to him by his Department Chair who is a strong Quality Matters advocate. As a new hire to the institution, Andrew felt it best to register for the workshop per the recommendation. He concluded the workshop by realizing there were improvements he could make to his course that would contribute to student learning. Despite his initial introduction to teaching online, Andrew demonstrates perseverance and a willingness to refine his abilities. Andrew noted that the QM taught him that improvements to online courses require small changes that amount to significant impacts on the course. While he took the course because his supervisor recommended it, he
vocalized gratitude for having taken the professional development, realizing that it presented useful content.

**Nicolle**

Nicolle is an Assistant Professor in the College of Arts and Letters, specifically teaching communication classes for the institution. She specializes in Risk Communication, Critical Culture and Communication, and Qualitative Research Methods. She has taught multi-media content courses and public speaking. She became comfortable teaching online, especially after Spring 2020. As a leader in the department, she also helps others teach their courses online. She’s taken the workshop two times, the first time in December 2020 and again in March 2022. After the first workshop, she redesigned her course and found the redesign useful with students noticing a positive difference in her online courses. She is using that experience to help train others in her department. Nicolle enjoys teaching online, but until Spring 2020, taught in person or hybrid. After Spring 2020, Nicolle sought to teach more online courses and refine her abilities in the environment. She commented that she prefers the flexibility of online courses, both for her and for her students, understanding that her graduate students are also professionals with busy lives. Teaching online also eliminates the judgement I noticed when in person students would see a brown female with an accent teaching a public speaking course.

**A Review of Online Teaching Self-Efficacy**

Self-efficacy relates one’s belief in their ability to accomplish a behavior by setting realistic goals and outcome expectations (Bandura, 1997). When translated to online teaching, online teaching self-efficacy is one’s belief in their ability to accomplish online teaching tasks (Tschannen-Moran & Hoy, 2007). Highly efficacious instructors are willing to take on
challenges and innovations regarding their teaching tasks (Corry & Stella, 2018). Self-efficacy is developed through four sources: mastery experience, physiological and affective state, verbal persuasion, and vicarious experiences (Alquarashi, 2016; Bandura 1997; Corry & Stella, 2018). Mastery experience provides opportunities to accomplish tasks and is highly effective at influencing self-efficacy (Tschannen-Moran et al., 1998). Physiological and affective state refers to one’s mental state as they achieve tasks (Gregoire, 2003). Verbal persuasion increases self-efficacy through expressions of support and encouragement (Bandura, 2009). Finally, vicarious experiences provide opportunities to observe others complete tasks (Bandura, 1997). The workshop in this case study provided an environment for the participants to find opportunities for practice to build mastery experience, undergo vicarious experiences, and receive verbal persuasion.

Professional development that focuses on verbal persuasion and vicarious experiences is effective; however, if the professional development offers opportunities for practice paired with support and feedback, the sources of self-efficacy from the professional development become more impactful (An, 2018; Tschannen-Moran & McMaster, 2009; Stein & Wang, 1988). Figure 2 illustrates the relationship between self-efficacy and professional development. In the figure, bulleted points in black provide details on the sources of self-efficacy. Bulleted items in orange identify how professional development can contribute to that source. These relationships are further discussed in the themes revealed in this case study. The statements in this figure are synthesized from Tschannen-Moran and McMaster (2009).

Figure 2

*Professional Development & Sources of Self-Efficacy*
Overview of Themes

A review of participants’ interviews, the workshop observation, workshop documents, and researcher memos revealed four themes with sub themes. The main themes that emerged from data analysis concerned knowledge gains as a result of the workshop, the importance of student perspectives, insight into online teaching and learning attitudes from workshop attendees, and perceptions regarding abilities for striving towards quality online course design and instruction. Interpretations regarding these relationships between findings and the research questions are presented in Chapter Five of this manuscript. Chapter Four introduces the relationship between findings and questions, but strictly focuses on the explicit results from the data collection and analysis processes.
The central question and first finding are discussed after the sub-research questions and their associated findings. This is because the sub-questions are appendages of the central question and contribute to answering this central question. These findings revealed that participants found the workshop beneficial for their roles as online instructors. The discussion to follow identifies the ways the workshop provided an environment that supported self-efficacy. First, the workshop introduced basic knowledge for online teaching and learning through teaching best practices in online course design. Many of the benefits of the workshop was only achievable through first setting this foundational knowledge as will be seen in the results. New knowledge was presented through a set of slides from the facilitator who used verbal persuasion to support participant discussions. Information and the practice of new information was also presented through activities during the workshop. These activities offered opportunities for vicarious experiences as participants saw applications of the best practices in an example online course. This information contributed to mastery experiences as participants applied this knowledge in an example online course by evaluating the example courses’ design according to best practices. Discussion during the workshop as new information was presented, activities completed, and the example course evaluation presented opportunities for participants to share vicarious experiences and receive verbal persuasion from the facilitator. This new information contributed to participant knowledge for teaching online. Because self-efficacy is about a person’s judgement about their capability to complete a task (Alquarashi, 2016); understanding components of successful online teaching was necessary to gain mastery experience and pursue task accomplishment.
Knowledge gained during this workshop affected participant attitudes for online teaching and learning, which became an indication of their physiological states as they worked toward building online teaching self-efficacy. Bandura relates physiological state to a person’s ability to exercise control over challenge (Bandura, 1986). Participants identified that the knowledge gained from the workshop encouraged them to set goals for their own online courses. Participants believed that these goals could be achieved through demonstrated supports structures and collaborative learning environments, which became more meaningful to participants through workshop participation.

**Knowledge Gains Intentional Design**

Sub-Research Question 1 asked how participation in the APPQMR workshop contributed to participant’s knowledge of teaching online. Findings revealed that participants learned the importance of intentional course design and course alignment. The primary tool used to highlight intentional design was the Quality Matters Higher Education Rubric, Sixth Edition. During the workshop, participants were asked to participate in activities that showcased an example course meeting or not meeting the design elements required by the rubric. Through these vicarious experiences, participants applied content learned from the workshop to an online course by thoroughly evaluating elements of the online course against the rubric’s requirements, offering suggestions for improvement or concurrence with what was presented and reasons why the example course was well designed. Discussions amongst each other and with the facilitator afforded opportunities for continued vicarious experiences as well as verbal persuasion. These experiences were instrumental in helping participants gain the necessary foundational knowledge for teaching online.
Through these vicarious experiences, participants found that attention must be paid to intentional design, meaning each element of the course must have an anticipated purpose that benefits student learning. Amanda commented on the simplicity of the concept of intentional design despite its tremendous impact on the course. Here, she talked about the workshop and what participation in the workshop meant for her knowledge of teaching online.

I don't know that it [the workshop] necessarily like revolutionized the way that I taught online. But it definitely made me more intentional about how I approached the online structure of my class. If nothing else, it just um made me be more intentional about what I did, and my classes um made me think through it and in more of a step-by-step fashion.

In line with this step-by-step layout QM provided for course design, Christina noticed that the workshop helped her organize what she knew needed to be in an online class but was not sure how to present.

What are the components, I want to have within an online class and... and for me it's kind of like I didn't quite know where to begin with this, I kind of knew things that should maybe be in there, like discussion posts and videos and it didn't kind of click until this QM class.

Participants first came to the workshop with some mastery experience as indicated in the quotes from Amanda and Christina. Some gained their initial online teaching experience in Spring 2020; however, they needed the workshop to help them realize how to best organize their online courses. This knowledge was gained through vicarious experiences provided to them as they learned how to apply best practices for online course design, with one of the main takeaways from those activities being the benefits of intentional course design.
**Sub-Theme: Course Alignment**

Participants walked away from the workshop with a belief that course alignment means ensuring the course objectives, instructional content, learning activities, and assessments work together to support student learning. By eliminating unnecessary materials that are not related to this aligned relationship, instructors better ensure that student activities support course objectives.

Several workshop documents focused on understanding Bloom’s Taxonomy for learning and knowing how to translate elements from the taxonomy to action verbs that result in measurable objectives. The action verbs were then used to develop the activities and assessments for the objective. The idea of alignment also supports clear instructions within each task students are asked to complete. The QM rubric heavily focuses on the importance of alignment, providing the greatest scoring emphasis on this task. Several activities in the workshop asked participants to use the example online course to identify instances of alignment or misalignment within the course and discuss how that was helpful for student learning. Participants were also asked how to improve examples of misalignment so that it would better contribute to student learning. This method provided opportunities for mastery experience, vicarious experiences, and verbal persuasion as it first provided a model for participants to review and apply their recently gained knowledge. Professional development is most effective when participants can practice modeling the behaviors they are learning and begin building mastery experience (Gosselin, 2016). Upon given this opportunity for practice, participants shared activity reflections, a discord that afforded them the opportunity to engage in vicarious experiences. The facilitator provided feedback on this discord, reinforcing participant thought processes and this coaching is an effective
professional development tool that builds confidence and effectiveness (An, 2018). Activity worksheets were used in conjunction with the example online courses to complete these tasks.

Interviews with all five participants consistently referenced these alignment activities and mentioned the need for online courses to demonstrate alignment and intentional design. They also noted the role alignment plays in ensuring students are actively participating in the course as they progress towards stated learning objectives.

Andrew gave a clear example of how he would apply alignment to his course because of the workshop. Here he discusses how content presentations need to be introduced in relation to their objectives:

What stood out to me [during the workshop] was including within the text or description of the video, how the video addressed certain objectives. [This] is something that I can see myself applying moving forward so that everything is as clearly linked to what you know what the objectives are as possible… I was obviously trying to be very explicit beforehand, but this sort of just opened my eyes to the number of other possibilities that I hadn't considered that could be problematic for that.

Corey acknowledged that all content presented to students should be intentional and cannot be put online for students to digest without a purpose.

The workshop was re-reminding me of those…of the QM standards and …and always keeping in mind that, you know, like what we’re doing like we can’t… we shouldn’t… as teachers, we shouldn’t just like put stuff out there just because we think it is cool or we think like it’d be fun or something like that. It should be connected to- there should be evidence or a point to the work or the content that we're putting up online.
**Sub-Theme: Universal Design**

Universal design principles were also addressed as key takeaways from the workshop, which contributed to participants’ knowledge for online teaching and learning and understand the tasks required for teaching online. As stated, a foundation in task knowledge supports the pursuit of task accomplishment as teachers who feel confident in teaching competencies will focus on improving those competencies (Pekkarinen & Histro, 2017; Tenzin et al., 2019). Elements of the rubric require that the course instructor design assorted learning activities to support the diverse learning needs of students. The workshop asked participants to use the example online course to identify different ways the instructor presented content to support the diverse learning needs of students. This analysis process afforded participants with a vicarious experience that enhanced their new knowledge for universal design. Additionally, the QM rubric requires that instructors include multiple modes of student-student and student-instructor communication, with the workshop asking participants to identify those modes in the example course. Finally, the rubric asks instructors to ensure navigation within the course is easy for students. These elements contributed to participants noticing that online courses can be designed to be engaging, energetic, and exciting. This was noted in the workshop observation through discussions as participants commented on the various learning activities and communication methods. These discussions through the completion of vicarious experiences as participants applied elements of the rubric to the example online course. Discussions also provided additional opportunities for vicarious experiences as participants shared their personal examples. This was also noted in the interviews as participants discussed different methods they employed, or could employ, to create engaging online learning environments. Diversifying instructional and learning opportunities while
promoting cohesion in the course promoted a positive teaching and learning environment. Physiological states were also revealed in these discussions as they remarked on the benefits of diversified instruction for students. Participants noted the increased importance that communication plays in online education and worked to ensure they could be contacted through multiple means. In reference to diversifying instruction and learning opportunities, Corey said, “Every time I took this workshop, it always helps me remember, like at the end of the day, this is about the students and their learning and helping find all the different ways to support them and their learning.” Amanda noted the necessity in diversifying the way her students communicate and see each other.

Giving them that opportunity to connect with one another, whether it be through even videos or presentations, like recorded presentations, or discussion boards, of whatever, but finding ways to connect, and connect it back to the learning objectives. I think what’s most helpful is being able to make those connections.

**Student Perspectives**

Several activities within the workshop provided vicarious experiences for the participants where they were asked to take on the student role. When participants considered student perspectives, useful insights were gained. Participants indicated that the workshop provided them with a better understanding of the student perspective in an online course. As participants looked at two example online courses through the lens of a student, they were asked to reference the rubric’s standards and discuss with each other if the course met or did not meet the rubric’s standards. If elements of the course did not meet the standard, participants were asked to identify ways to improve the course. During this process, participants were asked to begin developing
mastery experience as they were required to create their own solutions to improve the online course. In doing so, participants were able to better take on a student perspective in an online course, identify areas of confusion for students, and see how their roles as instructors could mitigate student challenges. Borup and Evmenova (2019) identified that competent model sources transmit knowledge and teach observers effective task management skills through revealing thought processes. Impersonating students allowed participants to undergo vicarious experiences as they explored provided modules and watched and listened to each other’s thought processes. All participants noted how meaningful this experience was to their knowledge of best practices in online learning. Regarding taking on the student role in the workshop, Andrew commented, “it was elucidating just in terms of what sort of information you need to make absolutely clear on every page.”

In several instances during the observation, participants shared details of their own courses that could be used to help the example course meet the rubric requirements. Participants were then presented with an “after” course that showcased improvements to the course and asked to review this course from the student perspective, which presented a model that was proficient and showcased the competencies they were seeking to obtain; increasing self-efficacy (McMahon, 2021).

Participants observed the importance of explicit instruction and clear course organization for students. Conforming with the previous theme of course alignment, revealing this alignment to support student learning became clear as participants took on student rules during workshop activities.

**Sub-Theme: Course Organization**
Clear instructions through clear course organization emerged as a sub theme to knowledge gained. For example, a workshop activity providing vicarious experiences asked participants to review a quiz that required a review of flashcards. All participants had trouble finding the flashcards, noting that extensive searching led to frustration and made them want to give up. Unclear instructions for course activities were also challenging. Participants identified the fundamental requirement for ease of navigation to motivate students. Corey specifically referenced the activity where participants realized how discouraging poor course design could be for online students:

I had to like to click through the whole course in order to find it. The professor had to like provide like the flashcards right and so like it took like a long time to get to the thing that was going to help me help a study for the quiz and so like looking at it through students’ eyes was like really eye opening.

Based on the new LMS used during the vicarious modules, Corey went on to indicate that his comfort level with the LMS might detract from student learning. Corey realized that students are more likely to not be familiar with the technology and need to see the most basic organization to eliminate frustration. “I feel like I’m an expert at navigating the LMS, but this activity required so many steps; and it’s like right, I don’t want my students to have to do that.” Christina noticed how course organization, and eliminating the frustration that comes with course disorganization, would help students feel confident about learning online: “I think that you would end up with students who would be more confident about taking online classes, because they know kind of the structure of the design.” Furthermore, Amanda indicated that poor and confusing design, like
what the workshop made the participants experience, could lead to students no longer logging into the course.

   I used to think that (pause) some students just don’t do online courses because they're lazy or they forget to log in or they don't want to do it. But I think after doing this [workshop activity], it was more, I wonder how much of that is, they log on, they can't make sense of it, and so they just say “forget it it's not worth my trouble.”

This quote from Amanda reveals a prior belief she held regarding online students. The vicarious experience the workshop presented her allowed Amanda to broaden her awareness for the potential issues online students may face, ultimately leading to her seeking to eliminate some of those challenges for students.

*Sub-Theme: Accessibility*

   A second sub-theme to the student perspectives main theme was the importance of accessibility in online courses. Participants were also asked to look at the course through the lens of a student who needed various accommodations and were able to see the necessity in ensuring accessible content in online course design. This became another vicarious experience that left lasting impressions on participants. For many participants, seeing the course through the lens of a student who might need an ADA accommodation was first introduced through this QM workshop, and that experience was enlightening. When discussing the use of alternative text, Andrew mentioned:

   It's just something that I hadn't really considered that would be so important is the alternative text. Just the looking at the source for the code of it and seeing it, and making
sure that it's labeled in a way that is useful and informative, it's just something that I was not really considering before, but now I am very aware of.

Others gained awareness of accessibility issues. Nicolle stated, “I will definitely say that it has made me more aware of different kinds of accessibility issues and not just those who have restricted mobility that you can see.”

Christina indicated that the accessibility lesson in the workshop was so impactful, she wished more was covered over the two-day workshop.

I wish we had more time to talk about… not the keys… the key standards, but some of the other standards but that's more because my background is like the ADA stuff and… and really trying to make sure that courses are... are accessible to every student. Um, and so, but that was that was impactful that's what I want to kind of go back with the summer, with my online class to go back and make sure I'm meeting these key standards.

**Attitudes that Online Teaching and Learning are Different**

Participant reflections on the knowledge they gained as a result of the workshop led to a revelation in their attitudes toward online teaching and learning. Sub-research question 2 stated: How did participation in the APPQMR workshop contribute to participant’s attitudes toward online learning? To recognize the differences between online teaching and learning, participants first had to learn key competencies for online teaching and learning, which data revealed they did through the main theme knowledge gained for intentional design associated with the prior research question. These key competencies formed the foundational knowledge that was necessary to lead to unveiling attitudes.
Four of the five participants in this study gained online teaching experience in the Spring of 2020; which was a very turbulent and challenging time for online education (Bao, 2020). Some instructors had experience teaching hybrid courses before the pandemic, and one had extensive online teaching experience before 2020. These experiences likely influenced participant online teaching self-efficacy and attitudes for teaching online. Yet, despite the challenges they may have faced in the past, these participants voluntarily registered for the workshop hoping to refine their ability to teach online. Apprehension regarding online teaching is often the result of unmet training needs, with training needs centered around online teaching pedagogy and competencies (Corry & Stella, 2018; Northcote et al., 2015). Attitudes are reflected in perceived control over tasks, with positive attitudes related to increased self-efficacy (Bandura, 1986). High levels of negativity contribute to feelings of threat and can completely diminish self-efficacy (Tschannen-Moran & McMaster, 2009), which is not indicative in this case study. While participant apprehension for online teaching prior to the workshop was not clearly assessed, participants volunteering for the workshop demonstrates their identification of an unmet training need and a desire to find a solution through this professional development opportunity, therefore, apprehension regarding online teaching and learning was not debilitating enough to prevent participants from seeking professional development.

The finding in this section consider the physiological and affective states of the participants because of that gained knowledge from the workshop. Instructor attitudes toward online teaching and learning are determined by their ability to create online courses and perform their roles online (Glass, 2017; Martin et al., 2019). In order to create an online course and perform the necessary roles for teaching online, instructors first identified that they needed to see
that online teaching and learning is different from teaching face-to-face. They were able to see the differences through the example online course and that example course’s application of the rubric.

Data collection during this case study revealed online teaching and learning perspectives that provided insight to participant attitudes after the workshop. As a result of their increased knowledge about online teaching and learning (as indicated by the findings in Sub-Research Question 1), participants revealed that they acknowledged differences that exist between teaching a face-to-face course and an online course.

Online teaching and learning perspectives became apparent through observation of discussions during the workshop and participant interviews. It was evident that participants could not easily translate face-to-face content to online content. Participants noticed that online teaching and learning required a time commitment that often surpassed face-to-face teaching. Furthermore, online teaching was viewed as flexible, and although it required a significant amount of work in the beginning, it was more resilient to unexpected challenges such as weather delays or sudden emergencies. Finally, it was noted that while online teaching was different and presenting learning material will look different, it can be achieved through appropriate course design elements, ultimately leading to fairness in the quality of education achieved through the learning environment.

Sub-Theme: Differences

Amanda recognized that translating face-to-face skills to online is challenging, but not impossible. She commented on how assumptions of easy translation can be detrimental, but also took the realization positively, acknowledging that improvements could be made without using
phrases that reflected a negative attitude to the challenges involved with translating face-to-face tasks to online tasks.

In the online environment, you know, the idea is oh well, these skills to translate to that, and so you know it’s always kind of hard for us to realize oh, maybe they don’t. Maybe they don’t really translate that that well to it, so I think that this kind of made me think all right there’s…there’s some stuff that I could be doing better.

A difference Nicolle noted about online classes versus face-to-face classes is that in a face-to-face class, instructors can easily answer student inquiries without all the students asking the same question. In an online course, she gets bombarded with emails. While noting the differences, Nicolle did not display discouragement from the additional challenge. She commented on how she quickly solved this key difference to accommodate her students.

In a class, I could teach content to 25 students. If someone had a question, they would ask that and if others had the same question, it could be resolved. Now, if they have trouble with one concept, I would get seven emails. So now, if I notice there is confusion, upon that second e-mail, I immediately send an e-mail and make an announcement to the class.

The workshop presented tools on how to convert a face-to-face activity to an online activity. For participants, it required seeing the translated face-to-face activity to the online environment to see the difference. This translation was presented to participants through examples in the rubric, which were then presented to participants in the form of vicarious experiences as they reviewed the two example online courses. As can be seen in Appendix M, many of the codes from data analysis regarding this finding were noted as online teaching and learning is different. As participants shared stories of their revelations from the workshop, this
emerged as a repetitive statement. As I reviewed my notes on consolidated quotes that talked about differences, I noticed that I couldn’t find negative perceptions regarding this acknowledgement. An example of those quotes and my personal reflections on those quotes (column in gray) can be found in Appendix O.

The vicarious experience that focused on eliminating the same activities in face-to-face and online instruction and replacing online courses with activities that complement the rigor of a face-to-face course helped participants visualize how to successfully carry out an online course. Also noted was that while different, online courses can still adequately challenge and educate students. The differences were not met with apprehension or a negative attitude, participants merely stated these differences during interviews and in observed workshop discussions. The differences in years of online teaching experience among participants of this workshop did not alter this finding. Novice online instructors repeated the observation that online courses are different more predominantly than the more experienced instructors. However, experienced instructors noted their appreciation that the workshop acknowledged this difference and then provided instructors with tools and resources to achieve necessary tasks for teaching online. Christina remarked on how the workshop helped her realize the nuances in online courses that distinctly make it different from her face-to-face courses.

While the content material is exactly the same between a face-to-face and an online class, they’re two totally different classes and… and so that’s the piece that that I have to learn, even though it’s…it’s hard for me this past semester to see the things that I should be doing differently. And, and so it was really eye opening for me to be able to…to realize that it was so much more than I even imagined what an online class was.
Amanda commented on how attending the workshop helped her realize how to translate activities to online, especially in relation to ensuring explicit instructions are associated with each online learning activity. “I was just trying to translate activities to online, just like I did in-person and it doesn’t always work. So I now I have a different approach to setting up course content.”

Sub-Theme: Fairness

Christina remarked that despite the differences between online and face-to-face instruction, achieving quality online courses is possible if the instructor realizes the difference between equal and fair:

You don’t have to be equal you just have to be fair; you know so when you’re dealing with employees it isn’t always about being equal, you know, same for same. It’s about being fair and… and I think that I need to take that philosophy into online teaching.

Christina went on to further elaborate on her concept of fairness by noting,

So it doesn’t have to be the exact same thing that you do in a face to face class, but you just have to make sure you go back to those learning objectives and you make sure that its fair in that those things are still coming across to the online students.

Andrew also noted the importance of striving to achieve similar successes, despite the differences that come with the change in course modality. These similar successes refer to the fairness in learning quality.

I do think that it [the workshop] made me realize that it can be just as involved as an in-person class if you set it up the right way. If it’s set up in a way, that’s thorough and
consistent, it can be close to an in-person class in terms of its effectiveness and the value I can provide the students.

**Striving for Quality Online Course Design and Instruction**

As my themes emerged, it became clear that the findings and themes of this research would build on each other. Initially, the knowledge for teaching online had to be established for participants to understand the online teaching and learning environment. This was achieved through the workshop’s focus on online course design best practices. The first finding discussed in this chapter serves as the cornerstone for subsequent findings. With this foundational knowledge in mind, participants were able to reflect on their attitudes regarding online teaching and learning. As the second finding established, differences in online teaching and learning were acknowledged, but this acknowledgement was not met with negativity or apprehension. Apprehension, a source that detracts from self-efficacy, for online teaching relates to unfamiliarity with online teaching pedagogy and perceived inadequate institutional support (Bingol et al., 2019). This understanding online and face-to-face differences contributed to perceptions of ability for designing and delivering online courses. Sub-research questions 3, 4, and 5 revealed related findings around perceived abilities. Thus, the themes identified to these questions will be addressed together to yield a clearer description of perceived abilities.

Additionally, these perceived abilities relate to various elements of self-efficacy. For example, creating an online learning environment and teaching in that environment are key tasks for teaching online; which are efforts that are characteristic of an individual working towards mastery experience. Because self-efficacy influences choices and the effort put forth in situations (Bandura, 1997), this finding regarding perceptions of abilities to create an online learning
environment is demonstrative higher perceived self-efficacy. Also, the willingness to take on challenges and set goals for improvement, despite challenges, is indicative of an efficacious individual (Bandura, 1997).

Creating Good online Environments is Achievable

This theme addresses the elements of course design taught in the workshop that helped participants feel they could create meaningful online learning environments (in line with Sub-Research Question 3). After learning best practices in online course design through vicarious experiences and exposure to verbal persuasion, participants realized they could implement those practices in their own courses. High levels of self-efficacy for online teaching was shown through a commitment to supporting instructional best practices and a willingness to implement new teaching strategies (Gosselin, 2009). Instructors who are willing to show effort often do so because of stronger self-efficacy beliefs (Tschannen-Moran & Hoy, 2007). This finding indicates a commitment to supporting and implementing learned best practices for online course design as a result of the workshop. For example, Andrew noticed that the first introduction to the course could be a starting point for solving that problem. The rubric places emphasis on ensuring students are well informed and situated when they first log into their course. “It gave me some sense of how I should be outlining my welcome pages and just making sure that I have everything that is absolutely necessary, included in that initial landing page.” For Andrew, the workshop made the efforts needed to improve the design of an online course manageable through presenting changes in small steps.

I wouldn’t necessarily say that they’re easy it’s just that, they now…that after going through the workshop they seem (pause)…like the process seems pretty replicable. Like
there’s so many things there that…or small steps that can have a big impact. And I guess going through workshop really helps layout that it’s a number of small steps, as opposed to sort of big changes.

The QM rubric takes best practices and categorizes them into easily ingestible pieces of information. Christina also acknowledged small efforts she could make in her class that would help create an impactful learning environment for her students and how initially, before the workshop, she became overwhelmed with ensuring her students received proper direction.

I think… yeah I did a little bit [feel overwhelmed] in that I felt like I needed to… to do more, each week with students. Um, send out a weekly email saying, these are all the things that are coming up this week are doing, putting together a video, so I… I didn’t feel like I was doing enough for online students.

The concept of small steps to make big changes greatly impacted participant perceptions of their ability to create meaningful learning environments. Through the combination of mastery experiences and vicarious experiences in the workshop that asked participants to evaluate elements of the rubric on an example online course, participants were able to see the large effect small changes could produce. The “before” example online course asked participants to implement changes to the course that would better meet rubric requirements. This presented participants with an opportunity to exercise mastery experience of the concepts they had learned. Vicarious experiences were also gained as participants discussed how their own courses met or did not meet the requirements like the example course. The after course presented an opportunity for a vicarious experience as they saw the improvements a fellow online instructor made to their online course because of the guidance from the rubric. These improvements were made possible
due to the nature of the rubric, as it breaks down elements of course design into small manageable pieces. Therefore, experiences that led to the realization that small changes could have big impacts was noted by the participants.

Corey acknowledged that what he learned about alignment was introduced to him in a way that reduced online course design burdens. “In regard to classroom prep, I think it [alignment] makes it easier to see all the connections so the lift doesn’t have to be as heavy as everything is connected.” With a lessened lift, Corey reflected on his ability to create an aligned online course environment. Similarly, Nicolle noticed,

I took it [the workshop] twice and in both times, I won’t say that I learned something I hadn’t known before… the first time- if you had done this after the first time, I would have given more things, but now I’ve internalized it so much that I’m using those strategies and it doesn’t feel like a lesson to me anymore. I’ve learned how to be accessible. I learned how to show the students the student support services.

Amanda commented that the workshop helped her acknowledge her responsibility to create the learning environment for her students and ensure they remain engaged. The rubric requires diversifying content to keep students engaged, and Amanda noted that she can do that in the courses she teaches.

Um it kind of put more of that responsibility on me to say okay well, can I do something in here to make it easier for them to digest this information and to make them want to come back to my class.

Goal Formation
The workshop motivated participants to review their online courses and make changes with the hope of improving the course to better meet student learning needs. People with high teaching self-efficacy are more likely to persist through tasks and make efforts to improve (Horvitz et al., 2015; Tschannen-Moran & Hoy, 2001). Furthermore, improved feelings of online teaching self-efficacy lead to perseverance through various online teaching challenges and persistence in teaching online tasks (Dolghan & Owen, 2020; Williams & Rhodes, 2017). Interviews with graduates indicated this desire and a discussion at the end of the workshop also indicated the participants desire to go back through their courses and make improvements, despite the additional work and challenge this may pose. Participants identified online teaching challenges such as poor design elements that detracted from student learning and were able to use best practices in course design to fix those elements. Some participants were able to make adjustments before their next online course while others were reserving changes for the next semester. All participants indicated new goals for their online courses as a result of the workshop, and these goals were related to challenges they often met while teaching online. Despite challenges, participants demonstrated a willingness to make necessary changes to improve their course based on the knowledge they gained from attending the workshop. Furthermore, highly efficacious online instructors are more likely to implement new teachings strategies (Culp-Roche et al., 2021; Hampton et al., 2020).

At the end of the workshop, participants were asked to reflect on their experience over the past two days. It was observed that participants commented on new goals and changes they would immediately make or would make in the next semester because of new content learned during the workshop.
Andrew was in the workshop that I observed and was interviewed. He commented in the workshop that there are several changes that could be made to improve the courses he teaches. He noted the need for clear instructions and restating learning objectives within each module, and indicated an interest in pursuing a QM review for his course. During the interview, he elaborated on those changes. Regarding his goal of creating an online course that meets QM rubric standards, Andrew remarked,

It doesn’t seem all that daunting. I mean obviously it takes effort and quite a bit of time and energy but if I came away from the workshop given like well if I devote that, then I should be able to achieve something that is you know much better than what I’m currently doing or something that is you know approaching like actual satisfactory sort of presentation for Quality Matters.

Corey remarked that the workshop made him think that there are multiple ways to ensure students are learning the material in addition to assessments, as required by the QM rubric. He became inspired to set goals that removed assessments to eliminate stress and present the material in a way that would better motivate the students.

Um obviously the bigger assessments need to have some role so that the students can see how they’re doing in the course, but I think like and weighing them down with all of these graded assessments is not necessarily beneficial. So that’s something that kind of changed. In my teaching and the way that I um present the materials and things like that… the checkpoints.

Nicolle’s goals post workshop extended beyond her own courses, and her ability to overcome online teaching challenges was reflected in those goals. She expressed scaling her learning to the
adjuncts under her purview and the program she manages. Through her own positive perception of her ability, she is hopeful she can influence other online instructors to improve their own courses, translating confidence in one course to confidence in managing multiple online courses culminating in an online program.

I want to take the next workshop, the three-week peer reviewer course, in the summer. I want to use that time to change my course to make it QM eligible for certification. Once my course is like that, then we have a master shell….so I want to rehaul the master shells and have everyone use that. I’ll try to get all the courses, 45 courses, in my department certified. I’m the only coordinator and I have a lot of sections every semester, and I have to work with a lot of adjuncts and convince them to get on board.

These goals mostly aligned with requirements and suggestions from the rubric. During reflection of these goals, participants did not indicate feeling discouraged because of the work that would be required, but rather encouraged due to the manageable nature of the rubric, its specific focus on individual improvements within online courses, and available support from the institution.

Institutional Help and Resources

Attending the workshop exposed participants to the help and resources available not only through Quality Matters membership but also through the institution’s Distance Education department. The workshop provided participants with a common language to help them frame questions should they need help with online teaching and learning. Christina remarked on this when she stated,
I have the language. That’s important because I think language can be a barrier and language and having that common language, we have a platform to start from. Not having that language might be intimidating to people who don’t know the questions to ask.

Attending the workshop also taught the participants the value of professional development opportunities from the department. Many commented on the experience and resources housed within the department and that knowing this made them feel supported and encouraged. Feelings of threat interfere with successful task achievement and diminish self-efficacy (Gregoire, 2003) but support structures can help instructors regain perceived control and the ability to exercise control over a challenging task can influence self-efficacy positively (Bandura, 1986). While the in-workshop opportunities for practice are necessary in professional development, Berry (2019) also found continued support post professional development, as participants gained mastery experience through practicing lessons learned, also contributed to online teaching self-efficacy. Because of the knowledge gained from the workshop, participants were able to augment their belief in their ability to create meaningful online learning environments, establish goals to create those environments, and as this finding demonstrates, feel supported in their efforts to improve their online courses and achieve those goals.

Some also noted despair that several instructors remain unaware to these resources and will not be able to improve their online teaching efforts. In reference to the professional development resources offered at the institution, Christina mentioned, “What bothers me is a majority of professors aren’t going to take this seriously and that in essence, affects student learning, but even more than that, it impacts how people view online learning.” Many
commented on the competence of the facilitator and the faith it instilled in them knowing that the facilitator also leads the Distance Education department.

When asked for important workshop takeaways, Christina noticed that the workshop helped her realize that she had a significant amount of learning to do regarding online learning, but also noticed that she would not be alone during her endeavor to become more proficient. “I think the biggest one was we don’t have to know it all, you know we don’t have to memorize and…and we aren’t on our loan or aren’t on our own, so I think hearing that made me relax.”

Andrew also acknowledged how the workshop showed him how he could improve and that there are opportunities for improvement. “If anything, it showed me that I could be so much better. That...that there’s many opportunities for me to improve. But it I don’t see it as necessarily daunting or is unattainable. There are people to help, the rubric helps.” These quotes from Christina and Andrew reflect how the support structures at the institution make online teaching challenges less intimidating and less discouraging.

Additionally, Corey commented on the relatability of the facilitator and how her background and expertise made her an approachable subject matter expert. This knowledge made him willing to seek her guidance and work with her team.

She was on our side, at one point, and now she had graduated up to like being a facilitator of the course and so she has that..that knowledge of...um...of the content and ...and going through the steps and seeing that she also like put all this into practice as well.

The workshop contributed to participants’ knowledge of resources, assuaged trepidation in asking for help, and promoted the use of a common language to facilitate discord between those who can help with online courses and the participant asking for assistance.
**Practical Applications are Helpful**

A key element of the workshop that participants found helpful was the practical examples presented. This theme, as demonstrated through the various references to the vicarious experiences presented in the workshop, has been discussed throughout the chapter; however, the importance of this concept for improving online teaching self-efficacy as well as its application to creating influential professional development programs warrants its own specific discussion. One of the goals of this study is to identify important elements of the workshop that contribute to online educator learning and promote online teaching self-efficacy. A research question for this study specifically asked about the sources of the workshop that contributes to perceived abilities. The practical applications that affords vicarious experiences is revealed to be an important source within the workshop that greatly contributes to perceived abilities.

These practical examples afforded participants with numerous opportunities to see and practice vicarious experiences that were relevant to the workshop’s teachings. This finding builds on the previous finding regarding support from the institution. The workshop’s practical applications also helped participants feel empowered in their ability to create meaningful online learning environments. Participants were asked to use the rubric to evaluate a course before and after it had been through a QM review. The course was a live course taught at a university. Using the knowledge introduced during a professional development workshop to meet an objective and accomplish a task contributes to changes in self-efficacy (Ross, 1994; Tschannen-Moran & McMaster, 2009). Therefore, participants cannot just be introduced new concepts, they must also apply the concepts through examples in order for self-efficacy to be influenced. Participants
noted that the practical application and experiential learning helped them see why elements of the rubric were important for student learning.

In one instance, participants reviewed the texts in the course. Nicolle commented on how this made her realize the importance of text in the online environment and how seemingly easy changes could have a big impact on her course.

If I use capitalization for emphasis, then the screen reader might scream at that student which would be inconvenient. I easily changed all of that. I don’t use capitalization anymore, I use certain font sizes if I want to emphasize something.

Amanda noted several observations regarding the practical application of the rubric.

But to me, the more practical examples are the most helpful. That’s always what stands out to me because it’s, you know, it’s one thing to be taught the curriculum and to be taught this, you know, whole way of thinking about online courses.

Amanda’s comment aligns with what I observed during the workshop. Seeing the application of the learned content yielded discussion on how they could see themselves applying the same strategies.

During my observation of the workshop, I noticed the poor examples would yield increased conversation from participants as they discussed why the examples did not meet the rubric standards. Amanda especially noted the benefits of the poor examples being the most impactful, “the bad example was more helpful than the good example I remember, like the good example was helpful, but to me it was not so effective.” The good examples were merely addressed as met by the participants, with little discussion as to why. This places additional
emphasis on the usefulness of the practical examples that demonstrate incorrect or unmet application of the rubric standards.

**Collaborative Learning**

Finally, this finding indicates how the collaborate learning environment contributed to participant reflections on their abilities to successfully design and teach online courses. Like the practical examples, collaborative learning presented opportunities for vicarious experiences and verbal persuasion that were woven throughout the text of this chapter, but is important enough to address separately as it proved to be a powerful tool in online educator professional development. The collaborative learning environment became one of the main sources from the workshop that influenced participant beliefs in their abilities. Participants indicated that the collaborative virtual learning environment helped them gain exposure to how other online courses were being taught across the institution. They enjoyed the examples shared by other participants and were able to glean ideas for their own implementation. Seeing peers succeed in similar tasks, an experience afforded to participants during the workshop, provided participants with vicarious experiences. This vicarious experience was exhibited through discussion of rubric application, past experiences, and problem-solving during workshop activities. People seek models who can demonstrate competencies they wish to attain; finding a model that can demonstrate this increases self-efficacy (Borup & Evmenova).

Additionally, the noted experience of the workshop facilitator as both a design expert and online educator allowed for the participants to comfortably ask questions and seek advice for improvements in their own courses. The verbal persuasion the facilitator offered through feedback and advice throughout the workshop was noted by participants. The facilitator was
well-regarded by the participants, and verbal persuasion is more effective when the source of the feedback and support comes from an esteemed individual (Bandura, 1997).

The experience of sharing during the workshop led Andrew to identify the importance of peer feedback. Collaborating with others as well as reviewing another person’s course led him to remark that, “it changed my mindset in terms of the amount to which I would share it with other people so that they could let me know their thoughts on it.” Corey commented on another benefit of the collaborative atmosphere the workshop promotes, “I like [the] collaborative part and like when we were working together, it just kind of tells me.. um…that I’m doing it right. That I’m doing it well.” Both participants identified the usefulness of collaborative learning through peer reassurance of their task achievement and effort.

In reference to solving problems online educators typically encounter, Amanda acknowledged that the collaborative environment provided her with strategies to enact. “And just talking with the other people in the workshop, we were able to share ideas you know just talking with other people that teach online (laugh), you know we… we were able to share those ideas.”

Nicolle corroborates Amanda’s statement by saying “I learned a lot from different people who attended the workshop with me, they had their own challenges and learning experiences that was- something that happens I didn’t think about and then they shared and that, and I learn.” Nicolle goes on to say that hearing what other people were doing in their courses to meet QM requirements, “validates the things I ask my instructors to do. I am more confident when I tell them to do these things because I know it’s a best practice. The workshop taught me this, people say they’ve applied this.”
During the workshop I observed that participants were not very conversational. The facilitator worked to encourage discussion. Andrew attributed the minimal discord to the virtual environment of the workshop; however, as he acknowledged above, the collaborative environment still encouraged him to share his online courses with others for feedback. Amanda and Corey’s comments regarding the benefits of collaboration represent increased conversation was present during their workshops.

**Summary: The Workshop Supported Perceived OTSE**

The Sub-Research Questions served as appendages to the Central Question for this case study. To better understand how the Central Question was answered, discussion of the Sub Questions first was appropriate. The Central Question in this case study is: How was perceived OTSE influenced during the QM APPQMR workshop as faculty learned about best practices in online course design? As this chapter discussed, there were many factors of the workshop that used sources of self-efficacy to support participant online teaching self-efficacy. As a result, participants reflected on increased confidence for teaching online because of gained knowledge in course design best practices.

Participants indicated that because of the workshop, they could comfortably teach an online course if they knew the course followed best practices in online course design principles. Some participants had several years of teaching experience prior to taking the workshop and had years of building toward mastery experience. Regardless of this, they all still indicated increased comfort and confidence with online teaching because of the workshop. During interviews, participants reflected that teaching a well-designed online course related to confident delivery of that course, even if it was a new course for the participant. This was expressed through
statements aligning good design practices with confidence in teaching delivery. In observation of the workshop, the facilitator explicitly stated that the training objectives were focused on design and not delivery. However, interviews with participants revealed the training on design translated to a confidence in instruction.

Corey explicitly indicated the correlation between professional development and its boost in his confidence regarding his abilities:

I think every time that I take a workshop, or I watch someone, even like watch a video but thinking more specifically about the workshops, (pause) like I feel like every time I take a QM workshop, that I’m being becoming more confident in my abilities.

Corey has taken this workshop twice and indicates that both times, he noticed an increase in confidence. Andrew noticed how quality course design would decrease the effort put in the beginning of the course, therefore, freeing up time to deliver the course effectively. In relation to his being asked to teach a course for another instructor, Andrew commented:

Knowing course design would definitely reduce the amount of stress on my part in terms of having to create things or set things up in a way that are (pause) I guess more in line with the Quality Matters structures that we’ve discussed. So, if I enter a course that wasn’t designed in that manner, I would definitely feel like I had to do more on my end to make it, um, effective or make it function effectively, whereas if I was taking over, a course, where it was already in place, it would only help with my ability to deliver in an effective manner.
Amanda also acknowledged how a well-designed online course would lead to an easier facilitation of that course. In the following quote she references herself, a new instructor, navigating a new course she was just asked to teach.

Even not knowing the content at something, if it's a well-designed course, you should be able to follow along and figure out like oh okay so that's what I'm supposed to be doing in this class, even if I don't know specifically what it is.

Attending the Virtual APPQMR workshop was found to be beneficial for participants and their perceptions of their ability to successfully teach online. The findings revealed that through multiple opportunities for vicarious experiences and verbal persuasion participants learned useful information regarding course design best practices which positively influenced their attitude towards online teaching and learning, resulting in them seeking to improve their online courses. A willingness to implement innovations and persevere through potential challenges is indicative of an efficacious person (Bandura, 1986) and interviews with participants reveal this willingness, specifically when applied to online teaching. Vicarious experiences in the workshop’s example online courses taught participants how to meet QM rubric expectations through breaking down best practices in course design into smaller concepts, allowing participants to see how small changes can have a profound impact. Participant perceptions on their abilities to improve their online courses based on these small steps was demonstrated through their acknowledging the usefulness of the support structures provided by the institution and positive earning environment promoted by the workshop’s collaborative learning opportunities. Participants’ knowledge of quality online course design helped them become more comfortable with online teaching and learning and seek to improve their own online courses knowing their efforts are supported with
access to a multitude of support resources. These relationships are further discussed in the next chapter of this manuscript.
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

The purpose of this study was to investigate how, if at all, online teaching self-efficacy is developed as a result of the QM APPQMR workshop. This case study is needed because, despite the increase in online student enrollments, there is an unequal increase in willingness and ability among online instructors. Furthermore, through exploring the implications of a workshop with online teaching self-efficacy as the theoretical framework, this case study revealed data that can be used to support online educators as they work to gain mastery experience in online teaching.

Interviews with five workshop graduates, a workshop observation, and a review of workshop associated documents were used to collect data. This qualitative data was coded to identify themes that were used to establish the findings of this research. The research questions and findings were aligned and discussed in the previous chapter. This final chapter provides implications of the results of the study and relates elements of the literature review with these findings to create actionable items regarding online teaching self-efficacy. This discussion is followed by recommendations to improve upon this research.

Discussion

Previous chapters of this manuscript highlighted the demand for online education and the barriers that prevent educators from teaching online. The barriers were argued to inhibit the acquisition of online teaching self-efficacy; the theoretical framework used in this study to assess the impact of the Quality Matters APPQMR workshop. The central question for this research study was, how was perceived online teaching self-efficacy influenced during the Quality Matters APPQMR workshop as faculty learned about best practices in online course design? The subsequent research questions and their associated findings dissect this central question by
applying various elements of online teaching and learning knowledge, attitudes, and participant perceptions, to sources of self-efficacy.

Findings identified that online teaching could be made easier if the participant has an understanding of the alignment between objectives, activities, and assessments strategically used to promote student learning. Data collection produced information confirming that participants understood these elements of quality course design. The workshop also presented a student perspective, allowing participants to see a course through a different lens to better understand the challenges their own students face and learn how to mitigate these challenges. Participants frequently commented on the workshop’s promotion of diversified learning opportunities as well as accessible learning content to create an effective learning environment. Online teaching and learning perspectives of the participants became apparent during data collection, and although literature presents a negative attribute to the adoption of online teaching and learning (Bingol et al., 2019; Lederman, 2019), these participants primarily remarked on the differences that exist between face-to-face and online courses without the negativity. This increased knowledge of online teaching and learning, paired with a neutral attitude toward online teaching and learning, influenced participant perceptions regarding their ability for teaching online. Creating online environments requires additional work from the instructor (Chiasson et al., 2015; Varvel, 2007); however, new goals that resulted from the workshop were deemed attainable by the participants due to their better understanding of the myriad of online teaching and learning pedagogy and the support structures that exist for them at their institution. Finally, specific to workshop sources, participants thoroughly enjoyed reviewing an example online course before and after QM rubric corrections were made as the practical exercises turned abstract concepts into tangible
applications. Participants also acknowledged the benefit of collaborative learning and its influence on participant perceptions. The discussion to follow interprets the findings while considering the central research question to deduce that the workshop directly contributed to participant’s online teaching self-efficacy

**The Workshop Supported Perceived OTSE**

Martin et al. (2019) indicated it takes approximately five years to gain mastery experience that significantly contributes to online teaching self-efficacy. This was because of a lack of formal education for faculty, forcing them to rely on experience to gain competence. Additional sources confirm that formal education, such as professional development, has a role in increasing instructor self-efficacy (Ibrahim et al., 2020; Pekkarinen & Hirsto, 2017; Tenzin et al., 2019) because it helps individuals focus on improving competencies in particular areas, therefore improving their self-efficacy of that task. Mastery experience will continue to be a powerful source of self-efficacy. However, with the appropriate resources, achieving online teaching self-efficacy can be supported by additional channels, such as professional development experiences that promote vicarious experiences and verbal persuasion. These channels may serve as catalysts to begin building online teaching self-efficacy and serve as reminders to encourage online educators to continue to pursue that mastery experience.

The sources of self-efficacy considered in this discussion serve as mitigation tools as mastery experience is being obtained. To some degree, the participants in this study exhibit varying levels of mastery experience as they all have been teaching online since Spring 2020 if not earlier. Despite their experience teaching online, participants sought online teaching professional development to improve their skills and abilities. As a result of taking the QM
APPQMR workshop, this study revealed that their online teaching self-efficacy benefited. This was demonstrated through the positive attitudes regarding goal setting and institutional resources, feedback on the workshop, and gained knowledge for online teaching and learning competencies.

**Goal Formation with Help from Institutional Resources**

Attitudes are related to the psychological source of self-efficacy. Feelings of fear and nervousness can translate to vulnerability and lower one’s belief in task accomplishment (Bandura, 1997). Black (2019) discussed how the differences in face-to-face and online instruction created a decrease in confidence. The differences between face-to-face courses and online courses can take an immense amount of instructor time and energy and require high self-efficacy for online teaching (Corry & Stella, 2018; Hampton et al., 2020; Northcote et al., 2015). The results of this case study show that participants acknowledged the differences but were willing to make changes and address these differences based on information learned from the workshop. The positive views of participants interviewed and observed during the workshop indicate that despite the time and energy required to teach online, strategies were learned that could mitigate apprehension.

Bandura (1997) discussed how self-efficacy is associated with individuals setting realistic goals and is influenced by their choices and the effort they put forth in overcoming challenges. Psychological states, a source of self-efficacy, may inhibit individual goal setting (Bandura, 1997). Apprehension, a psychological state, regarding online teaching is often a result of unmet training needs and insufficient institutional support for online instructors (Corry & Stella, 2018; Northcote et al., 2015). Because professional development may not be related to the individual’s
teaching goals, online faculty may not find their needs met through professional development (Bolliger et al., 2014; Kang, 2012; Wingo et al., 2016). Unmet needs may limit the ability of faculty to set goals for online environments. This is unfortunate because highly efficacious online instructors are more likely to implement new online teaching strategies, take on challenges, and set goals for improvement (Corry & Stella, 2018; Culpe et al., 2021; Hampton et al., 2020).

A major theme from this study identified participants who were willing to set goals for their online classes, despite the challenges this may inflict on them. Participant goals for their online courses ranged from an overhaul to ensure accessible content, pursuing an official QM review, and a complete redesign of all courses and sections within a program to ensure compliance with course design best practices and the QM rubric. Additionally, participants found the changes for improvement in their online courses required small steps that could compound to produce substantial impact, reducing the negative perceptions associated with being overwhelmed by tasks. These challenges were seen as manageable partly due to what was learned in the workshop, but also because participants realized that support structures existed that would help them overcome various online teaching challenges, enabling them to pursue innovations and implement change.

Additionally, two of the participants took the workshop more than once, indicating that the workshop was memorable and worthwhile for them. One of these participants explicitly stated that workshop attendance boosted their confidence for teaching online. The workshop served as a support structure for those participants as they came back to the professional development opportunity to continue to refine their online teaching abilities. This supports
previous research that claims workshops alone cannot influence behavior (Chiasson et al., 2015).

As the interviews revealed, these participants saw a benefit to what they learned from the workshop and wanted to refresh their knowledge for online course design to continue to improve their online courses. They saw this workshop as a useful tool in achieving that task. Participants also found that the supports structures in place from the department that provided the workshop helped them realize their continued goals for improvement. For workshops to be effective, supports structures that enable achievement of workshop objectives are necessary in order to inspire change and exerted effort (Tschannen-Moran & McMaster, 2009). These participants saw the workshop as a support structure as they worked to become better online instructors.

Furthermore, studies from Spring 2020 demonstrate that those who participated in professional development seminars for online teaching had higher self-efficacy scores at the beginning of Spring 2020 (Dolighan & Owen, 2020; Hofer et al., 2021). These repeat participants took their first workshops in 2020 and again in 2022, demonstrating an efficacious trait of continued improvement and striving for innovations (Morris & Usher, 2011). They saw the benefits of the workshop and came back for additional information that could be useful to their online courses.

**Practical Applications and Collaborative Learning are Helpful to Influence Perceived Abilities**

Online instructor training that exhibits exemplar courses, instructional design best practices, and testimonials from other professors may reduce online teaching skepticism and support self-efficacy (Horvitz et al., 2015). The APPQMR workshop seems to have met these targets for online instructor training. Negative perceptions of online teaching and learning may serve as a barrier to teaching online and achieving online teaching self-efficacy. One way to diminish negative perceptions of online instruction is to engage faculty in professional
development opportunities that can showcase online teaching and learning through modeling best practices (Borup & Evmenova, 2019; Elliott et al., 2015).

The practical applications within the workshop were lauded by participants as key contributors to their learning and perceptions of their abilities to create meaningful online learning environments. This is an example of how modeling and a review of exemplar courses are useful tools for professional development. The participants were first presented with the concept, asked to understand the requirements of the best practice using the QM rubric, and then asked to identify that requirement in an actual course and discuss whether that example met the rubric’s requirement.

Additionally, the collaborative environment received positive feedback. This is indicative of the impacts of two sources of self-efficacy; verbal persuasion and vicarious experiences (Bandura, 1997; Corry & Stella, 2018). As a reminder, verbal (social) persuasion can increase self-efficacy through expressions of support and vicarious experiences are experiences that occur through observing others (Bandura, 1997). Professional development focused on verbal persuasion and vicarious experiences is minimally effective if the participant does not have the opportunity to implement lessons and receive feedback and support from the facilitators (Guskey, 1989; Tschannen-Moran & McMaster, 2009; Stein & Wang, 1988). While verbal persuasion has a limited effect on long term self-efficacy (Tschannen-Moran et al., 1998), one of the goals of this research was to determine if the workshop could serve as a mitigation tool until the time required for mastery experience could be met. Vicarious experiences were achieved through workshop activities that asked participants how to improve various elements in the example course to meet rubric standards. In these instances, the facilitator, a subject matter
expert in QM, course design, and online teaching and learning would praise participants, model best practices, and offer guidance. Participants also had many opportunities to share experiences of past courses and lessons learned with each other. The promotion of this collaborative environment was a source of self-efficacy tied to the workshop.

Four of the five participants interviewed took the workshop in 2022. Their immediate perceptions support the initial increase in self-efficacy due to the professional development focused on vicarious experiences and verbal persuasion. They were motivated to set goals for their online courses because of the workshop and felt empowered to create changes in their online courses because they were made aware of support structures from the institution. One participant, Amanda, attended the workshop two years ago. Her interview still revealed increased online teaching self-efficacy as a result of the workshop, the changes she made to her online teaching practices, and the institutional support structures she leveraged to help with her online teaching efforts. The workshop supports an increase in online teaching self-efficacy and encourages participants to implement lessons, but also necessary for sustainment of that self-efficacy is feedback and support which in this case study, is demonstrated by the institution.

Course Design Competencies

Belief in their ability to create an online learning environment relates to an instructor’s online teaching self-efficacy because creating the online learning environment is a key task for teaching online (Gosselin et al., 2016). Managing the online classroom, providing effective teaching, using appropriate activities, and building a sense of community online all contribute to the instructor’s online teaching self-efficacy (Ali et al., 2017). The instructor’s perception of their ability to establish that online learning environment must be supported (Morris & Usher,
Online instructors have specific training needs which include pedagogical training for online teaching (Berry, 2019; Chen et al., 2017).

To feel efficacious about their online teaching abilities, instructors must be confident in their knowledge of the tasks they are asked to perform (Gosselin et al., 2016). Teaching self-efficacy represents the teacher or instructor’s confidence in their ability to develop student learning and achieve particular teaching tasks (Tschannen-Moran et al., 1998). Of note, teaching self-efficacy is related to the teacher’s belief in their ability to produce positive student learning outcomes and experiences (Perera et al., 2019). Correlations between online teaching self-efficacy and student achievement (Bao, 2020; Dolighan & Owen, 2020; Horwitz et al., 2015) indicate the need to help instructors understand student perspectives as they develop these environments; therefore, supporting their own online teaching self-efficacy. Furthermore, course structure and organization are major contributors to student achievement in online courses (Darabi et al., 2006; Ko & Rossen, 2017). The workshop’s purpose was to instruct participants on course design best practices. Course design elements that are effective in improving student engagement include the use of learning resources, instructor feedback, online tools, and opportunities for communication (Lockman & Schrimer, 2020).

The workshop helped participants gain a better understanding of intentional design through gaining knowledge in alignment, universal design, and accessibility. By first grounding their online teaching knowledge in the importance of measurable course objectives, participants learned how to create purposeful and relevant activities for their students. Participants also described an increased understanding of the student experience because the workshop had them view various elements of the example course as a student. Bollinger and Martin (2018) found
that student frustration can be mitigated by establishing clear expectations and detailed course direction. The example course held unclear expectations and course direction, which led to frustrated participants. Participants disclosed that while they felt they had a good grasp on alignment prior to workshop attendance, experiencing the purpose behind alignment and clarity made them look at their courses more intently and, in many instances, redesign several aspects of their courses to improve the student’s learning experience.

Notes on OTSE

This study identified participant perceptions of the QM APPQMR workshop. While increases to online teaching self-efficacy seemed to result from the workshop, this was the because of vicarious experiences and verbal persuasion promoted by the workshop. Mastery experience continues to be the strongest source of self-efficacy. Mastery experience cannot be achieved in a two-day workshop. It takes approximately five years in the practice to gain confidence through mastery experience (Martin et al., 2019). Arguably, the participants already had varying levels of mastery experience because they had at least two years of online teaching experience. For four of the five participants, Spring 2020 was the beginning of their online teaching career. And while they were thrust into online teaching due to a global pandemic, participant willingness to improve their online teaching abilities is also indicative of their positive physiological states regarding online teaching and learning. The experiences of the instructors who learned to teach online in Spring 2020, may have been subpar as many label learning during that period remote emergency teaching instead of online education (Bao, 2020). These participants’ willingness to refine their online teaching abilities indicates a positive psychological state, but it also affords them an opportunity to transition from emergency remote
instruction to online instruction based in pedagogy and best practices while they gain more mastery experience and work toward online teaching self-efficacy.

Two participants took the workshop more than once because while they found the workshop helpful, they found themselves needing a refresher on the content and arguably, a boost in their online teaching self-efficacy. Therefore, this workshop cannot serve as a single solution to create immediate and permanent increases in online teaching self-efficacy. This workshop can serve as a tool to encourage the acquisition of online teaching self-efficacy. In order to sustain self-efficacy, there must be support for online educators beyond the workshop.

Notes on the Workshop

There are “few studies on modeling best practices for online teaching and learning through the delivery of online professional development “(Borup & Emnova, 2019, p. 5). There is an overwhelming prevalence of face-to-face delivery of professional development for online educators (Meyer & Murrel, 2014). This study reviewed a workshop delivered online. Time is also a contributing factor that deters professional development participation of educators (McMahon, 2021). Workloads require a time commitment that takes away from training. The benefit of this workshop is that it only requires an eight-hour commitment over the course of two days. Additionally, successful online teaching is considered “the result of complex interplay among personal, pedagogical, contextual, and organizational factors within higher education institutions” (Baran & Correia, 2014, pg 97). Professional development for educators that supports successful online teaching is just as complex. This eight-hour workshop optimized vicarious experiences and verbal persuasion to present relevant data to participants who were seeking to improve their online teaching abilities. What sets the workshop apart is that it
provides a rubric that is heavy in best practices based on research but broken down into manageable steps for improvement and application. This case study also suggests necessity in tailored support after professional development is completed.

While meeting a need for supporting studies on modeling best practices for online teaching and learning, this workshop also follows many best practices for professional development. First, professional development for online educators is beneficial when delivered online (Chai et al., 2010; Moore-Adams, & Jones, 2015). The workshop assessed in this study was conducted virtually. Also, Gosselin (2016) and Bandura and Kupers (1964) promote peer modeling and opportunities for practicing behaviors during workshop; which is afforded to participants through the vicarious experiences of the workshop. In workshop opportunities for practice also increases instructor confidence with workshop materials (Berry, 2019), which was another experience afforded to participants via this workshop.

Overall, this workshop follows best practices for teaching online while also providing data for a specific population whose professional development needs are still being researched and defined.

**Suggestions to Improve Practice**

This next section will provide actionable suggestions resulting from the previous discussion. Specifically, the implications of this research to the applicable setting, higher education, is considered. Limitations of the study are identified as well as suggestions for future research to contribute to supporting the needs of online educators.

**Implications**
Learning how to teach online in a live environment, in a for-credit online class with paying online students, may diminish online teaching self-efficacy; therefore, researchers are working to refine online educator professional development (Adnan, 2018; Graham & Thomas, 2011; McMahon, 2021; Powell, 2010). This professional development would engage in opportunities for practice and refinement of skills as opposed to learning in a live online course. Studies from Spring 2020 revealed that there is increased support for addressing both developing resources for online teaching as well as increasing online teaching readiness programs to support online instructors (Bao, 2020; Sherer et al., 2020). This case study contributes to those findings using one support asset, the QM APPQMR workshop, as a means to continue to support online instructors. This study also demonstrates the importance of support structures for online educators. While a single workshop was helpful for online instructors, the sustainment of the lessons learned in those workshops is also necessary. A cohesive department that promotes workshops and continues to provide supporting elements post workshop is a powerful combination and necessary at institutions. Professional development attendees can then tailor their main takeaways from the workshop and apply them to their online courses, knowing their individualized application of what they learned will still be supported by subject matter experts.

The workshop teaches course design best practices through a collaborative environment that utilizes an example online course and a detailed rubric. The workshop is provided over two days, and the findings indicate that it contributes to online teaching self-efficacy. Therefore, implementation of a design-based training, specifically the QM APPQMR workshop, can quickly teach basic online teaching principles, show existing support structures of the institution to promote instructor confidence and bolster online teaching self-efficacy. The relationship
between the findings and its contribution to online teaching self-efficacy indicates that promotion of this workshop for educators who teach online would be a benefit to the institution and the students who take online courses.

This study shows the importance of course design best practices and its relationship to online teaching competencies. Specific lessons learned from participants of the workshop reflect standard course design best practices and principles that left lasting impressions. Since the workshop is focused on teaching course design, this is not surprising. However, because principles such as universal design, course alignment, and accessibility seemed novel to participants, it is implied that there is a need for online instructors to be exposed to basic course design best practices. While these best practices are advocated by an instructional designer, these considerations that promote effective student learning are not as common sense to the educators whose daily interaction with students and their learning is most influential.

The student perspective was also revealing. This indicates the need for instructors to personally navigate the same challenges their students may experience. Online educators should be required to take professional development online to best understand the online learning experience.

Finally, the workshop can also be used as a model for other professional development programs. Participants of the workshop positively reflected on the practical applications and collaborative environment. While these elements are standard best practices for effective professional development, the study corroborates this using the specific population of online educators. Making participants view poorly designed elements of an online course served to be very influential. Allowing online instructors a forum to discuss openly was also impactful. These
activities can be used in professional development agendas to bolster the effectiveness of the agenda’s intent.

**Limitations**

This study had several limitations. The sample was taken from one institution in the southeastern United States. The potential pool of participants was small and the actual participants smaller. While qualitative studies are not typically generalized, this small sample size makes it difficult to make inferences for other institutions. The site was also at a four-year university and was not inclusive of the atmosphere at a community college. Additionally, not every college within the institution was represented. Missing from the population pool were educators in science, engineering, computer science, and medical fields. The site has a large online nursing contingent; however, this was not represented in the sample.

Also, while the choice to only consider the virtual workshop option was purposeful and intended to bind the case study in line with the research design, this study did not consider other methods in which the APPQMR workshop may be taken. These other methods were via an in-person facilitated workshop, which was not an option due to current COVID restrictions, and a ten-day online facilitated workshop through QM’s LMS. The views of graduates from the other workshop modalities might yield different answers. Notably, a majority of the mentioned online nursing faculty participated in the ten-day workshop. Their reflections would contribute to this study.

Participants also volunteered to take the workshop, which is another limitation of the study. Those interviewed and observed willingly chose to seek professional development opportunities to improve their online teaching knowledge and abilities, which limits the depth of
attitudes and perceptions recorded in the case study. At this time, all modalities of the workshop are voluntary and open to all instructors at the research. Perceptions of mandatory workshop attendance might yield different perceptions. Finally, interrater reliability was not conducted on the coding and themes that emerged from the data set. The final manuscript is shared with the participants; however, findings were not verified with participants.

**Future Research**

Prior research on the QM APPQMR workshop focused on participant perceptions of faculty development and course design, with several articles referencing participant reflections on the importance of course alignment (Diehl, 2016; Kearns & Mancilla, 2017; McMahon & Stark, 2015). This research corroborates those findings as several discussion points revealed participant understanding of course alignment, course design, and faculty development. However, as literature reviews on online teaching self-efficacy reveal, few studies discuss the relationship between course design and online teaching self-efficacy (Corry & Stella, 2018; McQuiggan, 2012). This study’s contribution to the literature introduces the relationship between course design and online teaching self-efficacy, but several future studies are still needed to better establish this relationship.

A suggestion for future research is to conduct a case study on a population required to take the workshop. In this study, participants voluntarily sought out professional development. This internal motivation to improve their online teaching capabilities made the participants receptive to the content they were reviewing. It would be interesting to see if instructors who were required to take the workshop walked away with the same insights. Furthermore, several of the participants began their online teaching careers as a result of Spring 2020 when most
institutions moved to online instruction only. By choosing to refine their online teaching abilities, the participants in this study demonstrate a willingness to continue to teach online. A similar study on a population with a requirement to take the workshop should also take into account how many of those participants first started teaching in Spring 2020 as their perspectives might be different from the ones in this study.

An interesting theme from the study resulted in the common language that emerged from the workshop. A study could be conducted on the language barriers that exist between instructors and institution support structures, with these support structures including departments that conduct professional development planning. The study would focus on studying how creating a common language might alleviate the hesitancy in asking for help or if it contributes to instructor confidence in successfully carrying out their teaching efforts. Christina mentioned that she would often guess what to type in the search engine until her question was answered, or she hesitated to call support departments for help because she did not know how to phrase her question.

Finally, the literature revealed the role technology efficacy has on online teaching self-efficacy. This was not explored in this study, but a similar case study using a professional development workshop focused on teaching online teaching technologies could be studied to deduce its contribution to online teaching self-efficacy.

**Conclusion**

The noticeable increase in online learning enrollments warrants appropriate support structures for online educators, and online teaching self-efficacy is a key element of effective online education. However, adoption of online teaching continues to be met with resistance amongst faculty. Barriers to adopting online education include apprehension about online
teaching technologies, negative perceptions of the online learning experience, inadequate professional development for online teaching, limited access to resources, and perceptions of a diminished learning experience (Corry & Stella, 2018; Gillis & Kruss, 2020; Glass, 2017; Lederman, 2020). These barriers inhibit instructors from teaching online and achieving online teaching self-efficacy, which is that instructor’s belief in their ability to carry out online teaching tasks (Corry & Stella, 2018; Tschannen-Moran & McMaster, 2009). Online teaching self-efficacy is important because higher levels of online teacher self-efficacy leads to increased persistence in overcoming challenges, including helping students succeed (Culp-Roche et al., 2021). To support online teaching self-efficacy, professional development seemed an appropriate tool for investigation. “Learning as much as we can about how faculty persons actually learn to teach online and experience online teaching can provide additional perspectives that can inform how faculty development programs should adjust to achieve their ends” (Meyer, 2013, p. 3).

Through looking at the impacts of the QM APPQMR workshop under the lens of online teaching self-efficacy, this research was able to contribute to literature that seeks to support online educators. This study found that the format of the workshop is conducive to improving online teaching self-efficacy due the vicarious learning experiences and verbal persuasion opportunities presented. Vicarious learning and verbal persuasion are sources of self-efficacy (Bandura, 1997). The workshop also positively impacts participant psychological state, another source of self-efficacy. Data collection uncovered the benefits of this professional development opportunity that provides access to resources, discusses online teaching pedagogies, and introduces best practices in online course design. Findings showed that participants found themselves to be confident in course delivery efforts, have a better understanding of course
organization and structure, could understand student perspectives therefore improving their efforts as instructors, gained confidence in creating effective online learning environments and established goals to do so, felt supported by their institution in their efforts, and enjoyed the workshop’s environment.

This information can be used by institutions to support their online educators as a two day, four hours a day, workshop revealed diverse findings that all contribute to the online educator’s teaching self-efficacy. While additional research is needed to provide depth to this study, it serves as a sound starting point to meet the demands of increased online course enrollment and confident online educators.
REFERENCES

https://doi.org/10.1017/S0958344017000106

https://doi.org/10.1007/s11423-018-9620-z


faculty development program. *Online Learning*, 2(1), 85-111.


https://doi.org/10.25304/rlt.v26.2047


https://doi.10.26522/brocked.v30i1.851


https://doi.org/10.1007/s10755-014-9316-1


https://doi.10.1016/j.compedu.2016.01.014.


Doi:http://dx.doi.org/10.24059/olj.v20i3.648


https://eric.ed.gov/?id=EJ921851


https://doi.org/10.1016/j.edurev.2014.06.001


Stein, M. K., & Wang, M. C. (1998). Teacher development and school improvement: The


https://doi.org/10.3138.cmlr.68.1.078


https://doi.org/10.1016/j.compedu.2011.10.009

Tracy, S. J. (2010). *Qualitative quality: eight big tent criteria for excellent qualitative research.*


Walters, S., Grover, K., Turner, R., & Alexander, J. (2017). Faculty perceptions related to teaching online: A starting point for designing faculty development initiatives. *Faculty perceptions related to teaching online, 18*(4), 1-16.


https://doi.10.1016/j.iheduc.2009.05.001


https://doi.org/10.1080/1475939X.2014.940841.
APPENDIX A
Solicitation Email

Dear _____,

Lady Moran, who you may remember used to be the Director of Distance Education at this institution, is working on a new research study and needs your help. She is a graduate student at the University of Memphis, working on her EdD in Instructional Design and Technology.

The goal of this new study is to contribute to the body of knowledge that exists regarding online teaching self-efficacy. The purpose of this qualitative, explanatory case study is to investigate, how, if at all, online teaching self-efficacy is developed as a result of the Quality Matters APPQMR virtual workshop for full-time and part-time faculty at a four-year institution.

Who can participate? Must be a graduate of Quality Matters APPQMR virtual workshop, must currently teach a higher education course online, and must have the freedom to design the online course the participant is expected to teach. Part-time and full-time instructors will be accepted.

Time Commitment: You will be asked to participate in a 90-minute recorded Zoom interview and are encouraged to turn your video on during the interview. The interview will be transcribed and sent back to you for accuracy. A data sheet soliciting demographic information will also be provided with the transcription. Once the interview is coded in the analysis process, the codes and themes that appear from the transcription will also be sent to you for confirmation.

If you meet these requirements and are interested in participating, please e-mail Lady Moran directly at lmoran2@memphis.edu. You will then be provided with the consent form which will include further details on the study. The IRB number for this study is:

Thank you for helping improve the support we can offer online educators.

Regards,

Director of Distance Education
## APPENDIX B
Quality Matters Higher Education Rubric, Sixth Edition

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

* 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.
APPENDIX C
Consent Form

Consent for Research Participation

Title Online Instructor Self-Efficacy: An Explanatory Case Study using the APPQMR Workshop.

Researcher Lady Moran, University of Memphis

Researchers Contact Information lmoran2@memphis.edu

You are being asked to participate in a research study. The box below highlights key information for you to consider when deciding if you want to participate. More detailed information is provided below the box. Please ask the researcher any questions about the study before you make your decision.

Key Information for You to Consider

**Voluntary Consent:** You are being asked to volunteer for a research study. It is up to you whether you choose to participate or not. There will be no penalty or loss of benefit to which you are otherwise entitled if you choose not to participate or discontinue participation.

**Purpose:** The purpose of this qualitative, explanatory case study is to discover the challenges and successes faculty experience during the Quality Matters APPQMR training for faculty as they develop online teaching self-efficacy.

**Duration:** It is expected that your participation will last 1-2 months.

**Procedures and Activities:** There is an observation of the workshop. If willing, you will be asked to participate in a 60-90 minute interview as well as review the researcher’s transcript and analysis of the interview.

**Risk:** Some of the foreseeable risk or discomforts of your participation include questions regarding your online teaching perspectives and attitudes as well as personal thoughts regarding the APPQMR workshop.

**Benefits:** Some of the benefits that may be expected include a chance to discuss and reflect on the training and its potential impact on your online teaching.

**Alternatives:** Participation is voluntary, and the only alternative is to not participate.

Who is conducting this research?
Lady Moran (Lead Investigator, LI) of the University of Memphis, Department of Instructional Curriculum and Leadership is in charge of the study. Her faculty advisor is Dr. Craig Shepherd.

**Why is this research being done?**
The purpose of this qualitative, explanatory case study is to discover the challenges and successes faculty experience during the Quality Matters APPQMR training for faculty as they develop online teaching self-efficacy. You are being invited to participate because you are a graduate of the Quality Matters (QM) Applying the Quality Matters Rubric (APPQMR) workshop.

**How long will I be in this research?**
The research will be conducted virtually. It should take about 2-4 hours of your time.

**What happens if I agree to participate in this Research?**
If you agree you will be asked to participate in a 60-90 minute interview and then you will be asked to review the transcript and analysis of the interview for accuracy. The interview will occur virtually via web conferencing and all additional correspondence will be through e-mail. The web conference will be recorded for analysis purposes and you will have the option to have your video on or off.

These interviews are expected to occur January-February with analysis planned for February. The researcher is always available to you for additional information if necessary. You do not have to answer every interview question if you do not want to. Questions will focus on your experiences during the APPQMR workshop and your reflections that experience and its application to your teaching methods.

There is also an opportunity for observation during the Spring APPQMR workshop.

**What happens to the information collected for this research?**
Information collected for this research will be used as part of the LI’s research as she works to earn her EdD in Instructional Design and Technology from the University of Memphis. The data will inform the dissertation. Your name will remain confidential and a pseudonym will be used in lieu of names. Additional identifying information will also remain protected. Data will be stored in a database and shared with the research advisor for this program of study. This data will be stored on a password protected computer and cloud storage system until the LI’s graduation from the program, anticipated to be May 2022, and then destroyed/deleted.

**How will my privacy and data confidentiality be protected?**
We promise to protect your privacy and security of your personal information as best we can. Although individuals and organization that monitor this research may be permitted access to inspect the research records. This monitoring may include access to your private information such as name and interview recording. These individual and organization include:

- Institutional Review Board
• Government regulatory agencies

What are the risks if I participate in this research?
The risk or discomforts of participating in this research include a potential psychological risk through the introspective process of discussing the APPQMR experience and a privacy risk as your name, email address, and place of work will be used to inform the research, although this will not be revealed in the final dissertation. You may experience stress, emotional distress, inconvenience and possible loss of privacy and confidentiality associated with participating in a research study.

What are the benefits of participating in this research?
You may or may not benefit from participating in this research.

○ Participating has no known direct benefits to you. We do believe that this study will contribute to the body of knowledge that exists regarding the benefits of online teaching professional development and online teaching self-efficacy.

If you do not want to be in the study, there are no other choices except not to take part in the study

What if I want to stop participating in this research?
It is up to you to decide whether you want to volunteer for this study. It is also ok to decide to end your participation at any time. There is no penalty or loss of benefits to which you are otherwise entitled if you decided to withdraw your participation. Your decision about participating will not affect your relationship with the researcher.

Will it cost me money to take part in this research?
There are no costs associated with participation in this research study.

Will I receive any compensation or reward for participating in this research?
You will not be compensated for taking part in this research

Who can answer my question about this research?
Before you decide to volunteer for this study, please ask any questions that might come to mind. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Lady Moran at lmoran2@memphis.edu or the faculty advisor Craig Shepherd at cshphrd2@memphis.edu. If you have any questions about your rights as a volunteer in this research, contact the Institutional Review Board staff at the University of Memphis at 901-678-2705 or email irb@memphis.edu. We will give you a signed copy of this consent to take with you.
STATEMENT OF CONSENT

I have had the opportunity to consider the information in this document. I have asked any questions needed for me to decide about my participation. I understand that I can ask additional questions through the study.

By signing below, I volunteer to participate in this research. I understand that I am not waiving any legal rights. I have been given a copy of this consent document. I understand that if my ability to consent for myself changes, my legal representative or I may be asked to consent again prior to my continued participation.

As described above, you will be Audio/video recorded while performing the activities described above. Audio/video recording will be used for interview analysis purposes only. Initial the space below if you consent to the use of audio/video recording as described.

____ I agree to the use of (audio/video recorded)

__________________________  __________________________  _______________
Name of Adult Participant    Signature of Adult Participant  Date

Researcher Signature

I have explained the research to the participant and answered all of his/her questions. I believe that he/she understand the information described in this consent and freely consent to participate.

__________________________  __________________________  _______________
Name of Research Team Member  Signature of Research Team Member  Date
APPENDIX D
Interview Protocol

<table>
<thead>
<tr>
<th>Date:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td></td>
</tr>
<tr>
<td>Interviewee:</td>
<td></td>
</tr>
<tr>
<td>Interviewer:</td>
<td></td>
</tr>
</tbody>
</table>

Interview Script/Procedures

Thank you so much for meeting with me to help me with this case study. I sincerely appreciate it. The purpose of this research is to discover how, if at all, online teacher self-efficacy is developed because of the Quality Matters APPQMR virtual workshop. You will be asked a series of open-ended questions. You do not need to answer any question you are uncomfortable with. I’d like to remind you that this interview will be recorded and then transcribed verbatim. I’d also like to take this time to restate the informed consent document and ensure you that your privacy and confidentiality will be respected in this study. Pseudonyms will be used, and precautions will be taken to protect the data collected. This interview might seem different than a standard conversation, there may be moments of silence as I finish taking notes. It’s also not evaluative in any way. There is not right or wrong answer, I just want to hear about your perspectives. I expect this to take about 60 minutes, so again, thank you so much for taking the time. Ok, let’s get started!

Open-ended Questions

1. What do you enjoy about teaching online?

   *Follow up:* How long have you been teaching online?
   *Follow up:* What courses have you taught online?

2. Why did you take this workshop?

   *Follow up:* Was this training mandatory or voluntary?
   *Follow up:* What other online teaching professional development opportunities have you taken?

3. How did the APPQMR workshop contribute to your body of knowledge for teaching online?

   *Follow up:* How did this body of knowledge affect your perception of online learning?
Follow up: In this workshop, you had to navigate an example online course. What activity, or activities, did we do in that example course that contributed most to your learning?

4. What are your goals for your online courses after taking this workshop?

Follow up: How will you achieve those goals?
Follow up: How confident are you in your ability to meet these goals and what from the workshop can you use to help you?

5. How did the APPQMR workshop affect your perception of your ability to teach online?

Follow up: Prior to this workshop, what worries did you have about teaching online?

6. Describe one of the biggest challenges you’ve faced with online teaching.

Follow up: Having taken the APPQMR workshop, how might you approach that challenge now?

7. How does the quality of the design of an online course affect your ability to deliver that course?

Follow up: How did the APPQMR workshop contribute to your ability to deliver that online course?

8. What design practices will you consider in your online course that will improve or better support student learning?

Follow up: How did the APPQMR workshop contribute to your abilities to create those design practices?

9. What did the facilitator present during the APPQMR workshop that contributed to your confidence in online course design?

10. How did the APPQMR workshop impact your online teaching philosophy?

Follow up: How did the APPQMR workshop affect your perceptions of online teaching and learning?
Closing Questions
How many courses have you taught online since APPQMR?

What aspects of the APPQMR workshop did you enjoy?

What aspects of the APPQMR workshop would you eliminate?

How did conducting the workshop as a group session contribute to or detract from your learning experience?

Anything you would like to add that you think might help me understand your APPQMR experience?

Closing Remarks
Thank you again for participating in this interview and helping me with my case study. I appreciate you taking the time to do this. I will contact you with the transcription to confirm the interview’s accuracy. I will also provide you with a copy of my interview coding and analysis to verify accuracy. Again, let me assure you that the confidentiality of your responses will be respected. Please feel free to contact me any time at lmoran2@memphis.edu.
## APPENDIX E
Interview Alignment

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Interview Question</th>
<th>Purpose (from the literature review)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Question:</strong> How is perceived online teaching self-efficacy influenced during the Quality Matters APPQMR workshop as faculty learn about best practices in online course design?</td>
<td>1-11</td>
<td>See below</td>
</tr>
<tr>
<td><strong>Sub-Research Question 1.</strong> How did participation in the APPQMR workshop contribute to the participant’s knowledge of teaching online?</td>
<td>3, 4, 8</td>
<td>(3,4,5) efficacy construct of self-efficacy and competency expectations are addressed</td>
</tr>
<tr>
<td><strong>Sub-Research Question 2.</strong> How did participation in the APPQMR workshop contribute to the participant’s attitude toward online learning?</td>
<td>3, 9</td>
<td>(4, 5, 7, 10, 11) Perceptions and attitudes could be barriers to online teaching which inhibit experience and experience is a lead source of self-efficacy</td>
</tr>
<tr>
<td><strong>Sub-Research Question 3.</strong> How did participation in the APPQMR workshop contribute to the participant’s belief in their ability to create a meaningful online learning environment?</td>
<td>4, 5, 7, 8</td>
<td>(3) online course design creates the online learning environment (4) identify links between goals and the online learning environment (6) success measurements and standards for meaningful online learning environment (11) discussion on strengths (8,9) student success measures and relation to teaching self-efficacy</td>
</tr>
<tr>
<td><strong>Sub-Research Question 4:</strong> How did participation in the APPQMR workshop contribute</td>
<td>4, 6, 10</td>
<td>(3) online course design is a barrier for online instructors</td>
</tr>
</tbody>
</table>
to the participant’s belief in their ability to overcome online teaching challenges?

<table>
<thead>
<tr>
<th>Sub Research Question 5: What sources, if any, within the APPQMR workshop influence the participant’s belief in their ability to teach an online course?</th>
<th>5,6,7,10</th>
<th>4 see if goals align with constructs of online teaching self-efficacy (5) list of good online teaching might relate to the content covered in APPQMR (7) delivery question relating to design (10) workshop contribute to philosophy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background questions</td>
<td>1, 2</td>
<td>Ice breakers to solicit open discussion and set the pace for the interview</td>
</tr>
</tbody>
</table>
APPENDIX F
Initial Coding Brainstorm
APPENDIX G
Observation Protocol for Case Study Data Collection

Observation Protocol for Case Study Data Collection

Date: 
Setting: 
Participants: 
Summary: 

*Notes to observe: social interactions, activities, quotes (direct or paraphrase)*

*Topics to look for: perceived abilities, challenges faced, resilience during challenges, attitudes to online teaching, apprehensions, past experiences and their impacts on attitudes and perceptions, exposure to online teaching and learning, positive/negative feedback on activities, positive/negative feedback on content*

*Purpose: field notes permit researcher to return to the observation during analysis as well as allowing the reader of the study to experience the activity observed (Patton, 2015)*

<table>
<thead>
<tr>
<th>Observation</th>
<th>Researcher Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX H
Document Index

<table>
<thead>
<tr>
<th>Document</th>
<th>Summary</th>
</tr>
</thead>
</table>
| Rubric               | • Eight general standards  
• 42 specific review standards within the general standards  
• Focus on alignment where critical course elements work together to ensure learners achieve desired learning outcomes  
• Each standard is given a description on how to present the requirement in the online course  
• Each standard is provided with an example of how to present the requirement in the online course |
| PowerPoint Presentation | • Introduction to the principles of Quality Matters  
• Description of quality according to Quality Matters  
• Medium for introducing the standards and guiding activities |
| Activities 1-21 Worksheets | • Introduction activities  
• Review purpose and structure of a course  
• Activities to promote familiarity and understanding of the 8 General Standards and 42 Specific Review Standards  
• Guidance regarding how to decide if a QM standard is met or not met  
• Guidance regarding how to create recommendations to help others improve their courses  
• Guidance regarding ensuring accessibility and usability in online courses according to Universal Design for Learning principles |
| Course Worksheet     | • Document provided by course owner to the QM review committee introducing reviews to key course information |
| Blooms Taxonomy Worksheet | • Presentation of Bloom’s Taxonomy  
• Importance of measurable objectives that can be linked to activities and assessments in the course  
• Alignment between active verbs and course difficulty |
APPENDIX I
IRB Approval

Date: 1/17/2022

Re 22-005: TITLE OF PROJECT: “Online Teaching Self-Efficacy: An Explanatory Case Study”

Dear Ms. Moran,

We appreciate your cooperation with the human research review process. This letter is to inform you that study 22-005 the application has been reviewed on an expedited level. It is my pleasure to tell you that your application is approved.

This approval is subject to APSU Policies and Procedures governing human subject research. The IRB reserves the right to withdraw approval if unresolved issues are raised during the review period. Any changes or deviations from the approved protocol must be submitted in writing to the IRB for further review and approval before continuing.

This approval is for one calendar year and a closed study report or request for continuing review is required on or before the expiration date, 1/16/2023. If you have any questions or require further information, you can contact me by phone (931-221-7059) or email (youngh@apsu.edu).

Sincerely,

Harold A. Young, Ph.D. Chair, APIRB
**APPENDIX J**

Participant Data Sheet

Name of Participant,

Thank you for taking time out of your schedule to participate in the interview for my case study. To gather a little more information for this research, could you please fill out and e-mail back this data sheet? My e-mail is lmoran2@memphis.edu.

Thank you again.

Regards,
Lady Moran

<table>
<thead>
<tr>
<th>Part Time or Full Time Instructor?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Years taught online</td>
<td></td>
</tr>
<tr>
<td>Years taught in higher education</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX K
Secondary Codes

Finding 1: delivery improvement
Finding 2: intentional design/alignment
Finding 3: student perspectives
Finding 5 - creating a good online teaching and learning environment
Finding 6 - new goals because of the workshop
APPENDIX L
Field Notes Except

Assistant professor in management in CoB, 2nd year here. First experience was a grad student when everything shut down due to covid and everything had to move from in person to online. Was teaching a 200 person intro to management class at UoP, since then I’ve taught classes online. Experiences here have been for both in person and online classes. QM Workshop Case Study Interview

— assistant professor in department of communication, 5th year at ____ and an ___ graduation, taught hybrid and multi media content creation classes, here she’s the public speaking course coordinator, during covid started teaching online, have become quite comfortable teaching online, even when not teaching online must coordinate all public speaking courses for other online instructors, took QM training in December of 2020 and have been using a lot of what was learned, one of the students said she could use the way she designed the course in other courses and she found it very useful so I’m training other people and that’s been my experience. I find the rubric very useful. I wish I could use it more, but I’m doing it every semester. Post QM Workshop Case Study Interview

Facilitator

Started with how to use Zoom and housekeeping for the workshop.

Everyone has video on, and unmutes to talk. Video on is a workshop requirement. One person is at home, one person is using a zoom background, and the rest are in their offices.

Started with introductions:

Rubric is comprehensive, work towards it over time. (Observation from facilitator based on comment from a participant)

Slide: learning objectives review for the workshop.

Slide: going over overall goals from the workshop. Pushing for collaboration.

Slide: disclaimer regarding accessibility and the standards not 100% meeting the requirements for all countries/states/etc.

Activity #1 review scenario. Using a word document put in the chat. Read statement from a college algebra course and discuss if the standard is met or not met. The standard is learners are introduced to the purpose and structure of the course.

- Participants are asked to look at a snapshot of a syllabus to identify if the student can tell the purpose and structure of the course from the syllabus.
- I see them reading the document and thinking about it
- Launched a zoom poll on if the standards was met or not met
  - 60% not met, 40% met
  - Facilitator did not meet bc it didn’t really say what skills the students would learn, it’s not tangible enough, what does it mean when they say significant and correct, realistic, and the tech tools used are fuzzy and ambiguous
  - Facilitator- the grading policy is not specific and it raises more questions than it answers I think this is a good introduction to talk about QM’s subjectivity, that’s why later on we’ll learn about the review process so we’ll need to use that

Now we watch the 5 minute video from the executive director of QM (video did not work)

Slide: underlying principles of QM – faculty driven, collaborative, collegial, continuous, centered.

Slide: course review process introduction

163
APPENDIX M
Initial Findings from Coding
APPENDIX N
Findings, Themes, and Research Questions From Codes

RQ 1: How did participation in the APPQMR workshop contribute to the participant’s knowledge of teaching online?

FINDING: student perspectives are revealing

Interpretations/Conclusions

Themes contributing to the finding

Online teaching self-efficacy

student course navigation

student success in online classes

student confidence

understanding student experience

importance of student learning

structure benefits students

alignment for student benefit

student perspective is important

student challenges with online learning

student perspective provided

modeling what was good and what wasn’t showed student perspective well

perception of CTL from the student

students perceptions of online teaching and learning

student learning should be prioritized

tailor to students/better understanding of students

eye for good design

intentional design

intentional planning

effective design

design is becoming second nature

knowledge of instructional design best practices

benefits of clear communication

benefits of course alignment

online teaching pedagogy
APPENDIX O
Except from transcript coding and personal reflections

Instead of thinking about the online class as a separate entity as a separate class itself and and in thinking about how all the components that I am doing within this online class tie back to the learning objectives of the class X2 Q7 [CHRISTINA TRANSCRIPT ROUND 1]

'twhile the content material is exactly the same between a face to face in an online class they're two totally different classes and so that's the piece that I have to learn, even though it's hard for me this Semester to see the things that I should be doing differently. [CHRISTINA TRANSCRIPT ROUND 1]

'And, and so it was really eye opening for me to be able to to realize that it was so much more than I even imagined when an online class was. [CHRISTINA TRANSCRIPT ROUND 1]

'I know that I'm willing to take this class and make changes that are impactful for student learning, but what bothers me is the majority of the professors, not just at Austin Peay but other institutions aren't going to take it seriously and and that in essence, affects student learning, but even more than that, it also impacts how people view online learning X2 Q1, misc [CHRISTINA TRANSCRIPT ROUND 1]

'You don't have to be equal you just have to be fair, you know so when you're dealing with employees it isn't always about being equal, you know you same for same it's about being fair and I think that I need to take that philosophy into online teaching. [CHRISTINA TRANSCRIPT ROUND 1]

'It doesn't have to be equal it just has to be fair, so it doesn't have to be the exact same thing that you do in a face to face, but you go back to those learning objectives and you make sure that it's fair that those things are coming across. [CHRISTINA TRANSCRIPT ROUND 1]

'Obviously not just as but close to just as involved as an in person class if you set it up the right way. If... I still obviously much prefer in person and think that there's just things that you can't replicate. [OTL] [ANDREW TRANSCRIPT ROUND 1]

'I would also just say that um the big challenge online, aside from that is a pause trying to I guess it's sort of in hand in hand with that is trying to replicate some of the in class participation aspects of it. There's so many activities that I have or things that are just designed and created for in person classes

'And they require a certain degree of like presence in that respect that I am still trying to figure out how to appropriately translate online or to do something that is like an equal sort of alternative to it. [ANDREW TRANSCRIPT ROUND 1]

'Instead of thinking about the online class as a separate entity as a separate class itself and and in thinking about how all the components that I am doing within this online class tie back to the learning objectives of the class X2 Q1 [CHRISTINA TRANSCRIPT ROUND 1]

Talking about separate entities- different again?
different materials- acknowledging differences

Eye opening how different- but in a positive light.
some negativity here, however this is in relation to others who won't take the workshop

This seems important- fairness despite differences

Back to fairness- again not seeing negative insights despite the differences

Set up the right way- like they can do it no problem?

This might have something- hard not necessarily negative though, just addresses that things online are still different from face to face but indicating that they are still trying to figure it out, they aren't giving up.

Separate it- makes it easier to process. different but possible?