A MATTER OF QUALITY: TEACHER EXPERIENCES AND PERCEPTIONS AS QUALITY MATTERS™ COURSE REPRESENTATIVES

by

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ABSTRACT

DARLENE M. SCHAEFER. A Matter of Quality: Teacher Experiences and Perceptions as Quality Matters™ Course Representatives. (Under the direction of BETH OYARZUN)

Teachers at K-12 supplemental virtual programs may support Quality Matters™ peer reviews for organization-managed master courses. Although there are time, focus, and capacity concerns with this practice as teachers in supplemental programs may not have expertise in designing virtual courses or writing virtual content, the experience of serving as a Course Representative and applying the QM rubric provides the potential for an enduring professional development opportunity that may enrich teachers' commitments to virtual instruction and their understanding of the comprehensive virtual learning environment. This qualitative case study explored the experiences and perspectives of seven high school teachers at a state-led supplemental school who teach online and have served as Course Representatives for organization-managed master course QM peer reviews. Document analysis and semi-structured interviews served as sources of data, and data was coded using deductive codes from Ali and Wright's (2017) Online Faculty Professional Development model and inductive codes focused on participants' experiences and perspectives. The study revealed that organization-based, participant-based, and mutual factors led to teachers participating as Course Representatives. Thematic findings addressing their experiences and perspectives identified challenges and critiques, but also benefits for the program and individual teachers. Programs could boast an external seal of quality and educators could participate in an educative professional development experience (Davis & Krajcik, 2005) that provides an enriched understanding of the virtual learning environment and application in instruction and teacher leadership. The study extends on the Ali & Wright (2017) model, integrating Cowan et al.'s (2017) "community of practice" and educative curriculum experiences (Davis & Krajcik, 2005), as integral components of program-based course quality assurance initiatives that involve active teacher participation. Further research, including cross-site studies, quantitative research, or mixed methods inquiry that explore virtual educators supporting a culture of quality at their respective institutions, may extend the study's findings.

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DEDICATION

I dedicate this to my mom, Lucy Leon Guerrero, and my mother-in-law, JoAnn Schaefer. Thank you for providing love, support, and encouragement toward the academic and life goals of the girls and me.

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CHAPTER ONE

Canvas, *Moodle*, *Google Classroom*, and *Zoom* gleamed from kitchen counters and coffee tables throughout 2020, often becoming expressions of grievance for households when seven of ten K-12 schools across the nation suspended daily operations because of a global pandemic (Friedrich & Perotta, 2022; Molnar et al., 2023; National Center of Education Statistics, 2021). Although members of the public expressed mixed perspectives about virtual learning during the time of COVID-19, educational leaders and researchers have strived to distinguish between Emergency Remote Teaching (ERT) and sustainable virtual programs. The former evolved as a part of crisis management, and the latter involves a strategically designed infrastructure to support students in fully virtual settings (Gomez et al., 2022; Hodges et al., 2020). Nevertheless, the global lens applied to virtual learning because of widespread shifts during the pandemic publicly emphasized the importance of quality assurance and durable practice for K-12 virtual programs (Francom, 2021; Hirsch et al., 2022).

Standards for Instruction and Course Design in Established K-12 Virtual Programs

While remote learning became a part of global discourse in 2020, K-12 virtual learning programs have existed for over a quarter of a century, and many sustainable programs rely on strategic planning, research-supported practice, and quality assurance metrics. Since the early years of K-12 virtual program implementation, literature has identified several requisites for student success including consistent and reliable technology, structured learning environments, support with self-regulation, and clear and consistent communication streams (Barbour, 2022; Lee & Figueroa, 2012; Lowenthal et al., 2020; Roblyer & Marshall, 2002; Sun & Rogers, 2021; Weiner, 2003). Additionally, inquiry on teachers in the virtual environment found that educators, regardless of grade level, subject area, and years of experience, require professional development focused on supporting students online (Archambault et al., 2022).

Collaborative research on K-12 virtual programs led to the establishment of several frameworks to guide online instructional practice and online course design, including the Quality Matters™ (QM) rubric (Archambault et al., 2022; Quality Matters™, 2022; Rice, 2014). QM, a nonprofit organization supporting quality assurance for online courses, provides one of the most prolific course design rubrics

and frameworks applied in Higher Education and K-12 educational settings (Legon, 2015). QM rubrics were created to guide educators and program leaders in the development, evaluation, and improvement of online courses (Quality Matters™, 2022). An external peer review can provide a QM certification mark indicating an online course has fulfilled the prescribed General Standards and Specific Review Standards outlined in the rubric (Quality Matters™, 2022). Several supplemental K-12 virtual programs, programs that are not diploma granting but provide expanded instructional offerings to students enrolled in schools and districts across the respective states, apply standards and rubrics for online course design including the QM rubric (VLLA, 2022). Programs affiliated with the Virtual Learning Leadership Alliance (VLLA), a collaborative of supplemental K-12 virtual programs across the country, often place organization-managed courses through a QM external peer review as a means of ensuring course quality for adopters across the respective state. As of the third quarter of 2024, 249 courses authored through state-led, supplemental, VLLA-affiliated member programs, received QM certification (Quality Matters™, Reviews and Certifications, 2024; VLLA, 2024).

K-12 Teachers Participating in the QM Process

To support QM initiatives, state-led, supplemental, K-12 programs may rely on a pool of teachers to serve as QM Course Representatives. Course Representatives are designated to prepare an online course for peer review and serve as a point of contact for the external review team (Quality Matters™, 2022). According to QM, Course Representatives should have a working knowledge of the course, prepare a course and supporting documents prior to the review, facilitate course changes as needed, and address questions for the review team throughout the peer review process (Quality Matters™, Reviews and Certifications, 2024).

A caveat to teachers serving as Course Representatives is some supplemental programs follow organizational structures in which teacher expectations emphasize daily online instruction. Teachers are not necessarily the designers or authors of online courses (Linton & Journell, 2015; Virtual Learning Leadership Alliance, 2022). Supplemental programs may provide teachers with complete, standardized, organization-managed master courses and structure the course development processes separately from

teacher instructional requirements (Linton & Journell, 2015). Therefore, teachers in K-12 supplemental programs may have experience teaching online but not developing course content online. They may serve as QM Course Representatives for courses they did not design or author.

Professional Development Potential of the QM Course Representative Process

There are divergent skills and tasks between teaching online and designing courses online (Archambault et al., 2022; Crews & Wilkinson, 2015; Duncan & Barnett, 2010; Schmidt et al., 2013; Stone & Springer, 2019). However, serving as a Course Representative provides teachers the opportunity to demonstrate contextual skills and interact with multimedia in an environment comparable to the environment in which they instruct. The hands-on and real-world aspects of the peer review process correspond with research-supported features of effective professional development for online educators (Dawson & Dana, 2014; Gomez et al., 2022; Rice & Dawley, 2009). Furthermore, the practical skill application of the peer review process and the rubric's emphasis on online course quality could enhance teachers' conceptual understanding of a fully virtual learning environment (Archambault et al., 2022; Adair, 2017). Additionally, the novel experience of serving as a Course Representative and the commitment required to follow through with the process, including the training and support needed to ensure a successful review, may provide an enduring professional development experience for virtual teachers (Ali & Wright, 2017).

Serving as a Course Representative may potentially expose educators to professional skills relevant to online instruction; however, there are time and professional considerations for teachers serving as Course Representatives for organization-managed master courses. Given the 24/7 nature of fully virtual programs, managing time and multiple responsibilities are challenges even the most seasoned of educators face when teaching online (Farmer & West, 2017). Before a teacher can begin the review process, they must commit time and professional focus to learning and applying the QM rubric in preparation for an official review (Gregory et al., 2020; Roehrs et al., 2013). Additionally, a course that is actively used for instruction may need design and content updates to prepare for an external review, and updating course content presents additional time and professional focus demands that diverge from

instructional responsibilities (Gregory et al., 2020; Linton & Journell, 2015; Roehrs et al., 2013). Course Representatives must also prepare a course worksheet that provides course design specifications and documentation correlating with QM rubric standards prior to a review (Quality Matters™, 2022). The review period can take three weeks or longer to complete, and during this time, a Course Representative must be available to address questions that may arise from the external review team (Quality Matters™, 2022). Additionally, results may indicate the need for a peer review amendment and course updates that require additional time, focus, and professional reflection (Quality Matters™, 2022).

Not only are there time and focus concerns for teachers serving as Course Representatives, but research on the effectiveness of QM implementation in fully virtual learning environments remains inconclusive (Lee et al., 2020; Lynch & Gaston, 2020; Swan et al., 2012). Furthermore, the QM rubric focuses on course design and not daily instruction which is the primary responsibility of virtual teachers in supplemental programs. However, prior research has aligned QM's design focus with instructional frameworks. Bogle et al. (2009) and Swan et al. (2012) aligned the QM rubric to Garrison et al.'s Community of Inquiry (COI) framework focused on cognitive presence, teacher presence, and social presence in the online classroom (Garrison et al., 2000 as cited in Swan et al., 2012). Crews and Wilkinson (2015) aligned the framework to Chickering and Gamson's (1987) seven principles for good practice in undergraduate education (Chickering & Gamson, 1987 as cited in Crews & Wilkinson, 2015). Aligning QM's course design focus with instructional frameworks might suggest improved teaching and learning experiences from QM applications, but research has not clearly defined the perceived impact of QM applications on professional practice.

Nevertheless, the QM rubric and the Course Representative experience may provide common language and a more in-depth understanding of the virtual learning environment for teachers (Adair & Shattuck, 2015; Baldwin, 2019; Shattuck, 2015). Additionally, research has suggested effective professional development emphasizes the comprehensive teaching and learning experience in virtual environments, distinguishing between online *teaching* and online facilitation (Archambault et al., 2022). Serving as a Course Representative and reflecting on how outside individuals perceive course

components may compel teachers to consider how the combination of course design and daily teaching activates student learning. Furthermore, the ongoing support and multi-step dynamic of serving as a Course Representative throughout the peer review process potentially align with effective online professional development models (Ali & Wright, 2017). The overall experience of participating in the QM review process may provide ancillary benefits; potentially expanding a teacher's understanding of the fully virtual learning environment and the connection between instruction and course design.

Problem Statement

The QM rubric prevails as one of the most ubiquitous quality assurance frameworks for virtual programs (Legon, 2015). State-led, supplemental program teachers may invest time and professional focus to serve as Course Representatives for organization-managed master course reviews (Quality Matters™, 2022; VLLA, 2022). However, research is not well-established regarding the impact of the QM rubric in the K-12 virtual learning environment (Legon, 2015). Additionally, in many supplemental programs, the core responsibility of teachers is to instruct students using a fully authored, organization-managed master course and not design online courses (Linton & Journell, 2015; VLLA, 2022). Teachers with online instructional expertise do not necessarily have online course design expertise (Crews & Wilkinson, 2015; Schmidt et al., 2013; Stone & Springer, 2019; Trinter & Hughes, 2021). Whether teachers benefit from the time and professional focus required to prepare and submit a course for QM review beyond an outside accreditation of quality assurance remains indeterminate. However, participating in official reviews as a Course Representative may provide a significant professional opportunity that allows teachers to apply skills specific to the virtual learning environment, build professional capacity, support the conceptualization of a fully virtual learning environment, and enhance the commitment to high-quality virtual learning (Adair & Shattuck, 2015; Ali & Wright, 2017; Archambault et al., 2022; Baldwin, 2019; Crews & Wilkinson, 2015; Duncan & Barnett, 2010; Schmidt et al., 2013; Sheets et al., 2023; Stone & Springer, 2019).

Purpose and Research Questions

This qualitative case study explored the perspectives of K-12 virtual teachers at a state-led supplemental school who share the common experiences of teaching online courses for a fully virtual program and serving as Course Representatives for organization-initiated QM course reviews (Creswell & Creswell, 2013). The study's findings aim to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. Additionally, the study may provide implications for professional development opportunities for virtual teachers and drive further research on the implementation of quality assurance frameworks to enhance educator practice. Three research questions guided this study and focused on the experiences and perspectives of teachers serving as Course Representatives before, during, and after a QM review including:

RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ 2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

Conceptual Framework

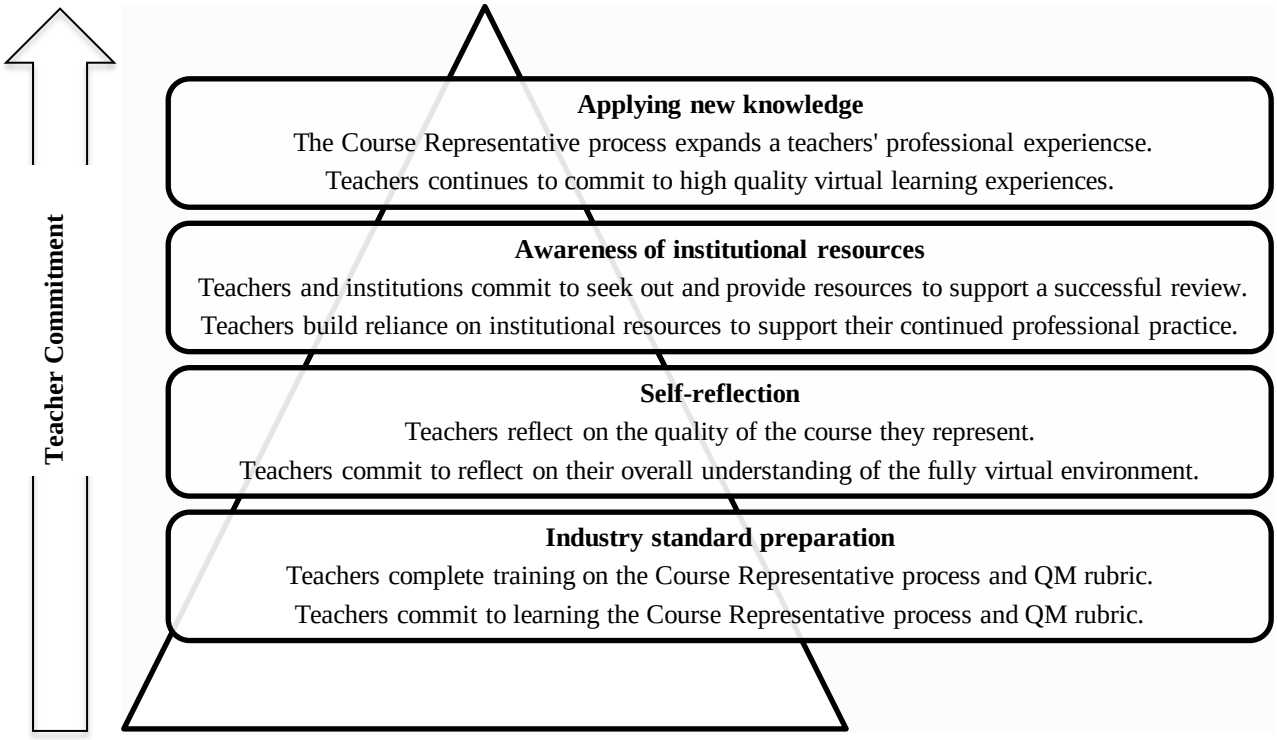
The Course Representative experience provides several research-supported features of effective professional development for virtual teachers (Archambault et al., 2022; Dawson & Dana, 2014; Gomez et al. 2022; Rice & Dawley, 2009). For instance, throughout a peer review, Course Representatives maintain several responsibilities, interact with tools and technologies, including the LMS and the QM Course Review Management System (CRMS), and encounter scenarios specific to the virtual learning environment (Quality Matters™, 2022). Additionally, the Course Representative process may provide an enduring professional development experience that potentially builds online educator capacity (Ali & Wright, 2017). QM does not provide a distinct professional development for the Course Representative role; however, programs that leverage teachers to support organization-managed course peer reviews may provide organization-based training to support teachers in the peer review process. The organizational

training and the hands-on Course Representative experience have the potential to provide a lasting professional experience for teachers that enhances educator capacity and effectiveness.

Ali and Wright (2017) propose a four-tier pyramid model for online faculty professional development aligned to QM implementation. Although designed specifically for Higher Education faculty, Ali and Wright's Online Faculty Professional Development model provides implications for K-12 teachers who might serve as Course Representatives for organization-managed master courses. The pyramid follows faculty implementation of the QM rubric. The pyramid is set in four layers. At the base of the pyramid is industry-standard preparation. The pyramid then progresses to the second layer of self-reflection, the third layer of awareness of institutional resources, and the fourth layer of applying new knowledge (Ali & Wright, 2017). While the pyramid model focuses on transformative professional development experiences for online faculty, it could also align with the progression of the Course Representative experience and an educator's enhanced commitment to quality online course design and instruction throughout the peer review process. The Course Representative experience has the potential to provide an enduring professional experience that enhances a virtual teacher's overall capacities, bolsters commitment to virtual instruction, and improves professional practice.

Figure 1 below presents a pyramid of the tiers of Ali and Wright's (2017) Online Faculty Professional Development model and provides annotations of the Course Representative process as a sustaining professional development opportunity for virtual teachers.

Figure 1: *Course Representative experience and alignment with Ali and Wright's (2017) Online Faculty Professional Development model. Figure 1 demonstrates the potential of the Course Representative process to be an enduring professional development opportunity*.



Methodology

To address the research questions, an exploratory case study involving a purposeful sample of Middle School and High School teachers who have experienced the QM rubric as Course Representatives and teach at a state-led, K-12 supplemental virtual school was conducted. Exploratory case studies seek "'what' and 'what about'" (Yin, 2014) a situation or phenomenon and typically begin with a clear rationale to drive the research (Yin, 2014). Exploring teachers' perspectives of the QM Course Representative experience at a specific, K-12 virtual school provided the foundation for inquiry.

A case study approach allowed for K-12 teacher experiences and perspectives to be examined in the context of a fully virtual learning environment (Yin, 2014). Additionally, case study methodology centered research around a "bounded system" (Merriam, p. 28, 2009). The bounds of the case included the virtual teachers of a specific K-12 virtual school and their work supporting course design quality assurance initiatives through service as QM Course Representatives. Case studies also pull from multiple

data sources to provide triangulation and increase reliability (Baxter & Jack, 2008; Merriam, 1998; Stake, 1995; Yazan, 2015; Yin, 2014). Data sources for this study included documents and document analysis memos of organization-based Course Representative training materials, QM review process support materials, and materials teachers provided to support the course review process. Data also included transcripts and researcher memos from semi-structured interviews with a purposeful sample of teacher participants. The interview protocol incorporated document discussion for elicitation response, providing an opportunity for teachers to discuss materials they provided for the QM review process (Barton, 2015; Douglas et al., 2015). Data was maintained in a case study database, and data was analyzed and coded through multiple phases to establish patterns, themes, and converging evidence (Bingham, 2022; Yin, 2014).

Delimitations

Since the inquiry is a case study with a "bounded system" (Merriam, p. 28, 2009), all research took place at a single, K-12, state-led, supplemental virtual school in the continental United States. All participants were current virtual teachers at the school who had taught at least one-semester term since serving as a QM Course Representative. To provide recent perspectives, teachers served as Course Representatives no more than two years prior to the study.

Assumptions

Teachers who served as Course Representatives six months to two years before the study still held accurate recollections of the QM course review process. Additionally, teachers who served as QM Course Representatives at least six months prior to the study had time to reflect on the perceived significance of the experience and the significance of the rubric in professional practice. Furthermore, providing online teacher participants with a copy of the rubric and documents of the experience evoked recall that could be integrated into discussion and elicit responses. It was also assumed that teachers who continued to teach online at the case study site were committed to providing quality instruction for all learners and wanted to engage in professional experiences they perceived as potentially impactful to student growth.

Significance of this Study

Although classroom learning resumes at the pre-pandemic scale, the virtual learning environment still provides an opportunity to connect students, highly qualified teachers, and a robust curriculum without geographical or time constraints (Barbour & Reeves, 2009; Berge & Clark, 2005; Cavanaugh, 2001; Cavanaugh et al., 2009). Despite the benefits of virtual learning, research reveals unstructured approaches to online course design, haphazard online instruction, and lack of meaningful professional development may result in learning setbacks (An et al., 2021). Quality assurance processes often support virtual programs and provide structure and sustainability to programs. While the QM rubric proliferates among K-12 virtual programs to structure course design and ensure quality (Legon, 2015; Quality Matters™, 2022; VLLA, 2022), research is still emerging as to whether educator investment to learn about the QM process and participate in an official review to support QM initiatives extends beyond an external quality certification. Research on the experience and perspectives of teachers serving as a QM Course Representative may guide online educators in setting goals and strategies for professional growth and provide implications for programs leveraging teachers in course quality assurance initiatives. Additionally, exploratory findings may guide further research on the significance of QM and other course quality assurance frameworks on K-12 professional practice.

Chapter One Summary

Online instructional best practices and online course design processes include several criteria that set virtual environments apart from traditional classroom environments (Archambault et al., 2022). Professional development focused on engaging and connecting with students in a fully virtual environment is a common prerequisite for all K-12 teachers regardless of their depth of knowledge and experience in the classroom. Effective professional development for virtual teachers provides contextual tasks and allows teachers to solve technology problems comparable to daily teaching experiences. Many state-led, supplemental programs compartmentalize responsibilities, and teachers may teach from organization-provided online courses they do not design. However, teachers at these supplemental schools may be offered the option to participate in the QM course review process as Course Representatives, an

opportunity that could resemble the contextual tasks, technology experience, and problem-solving skills of instructing online. Although specifically focused on course design, the entire Course Representative experience could align with Ali and Wright's (2017) online professional development model and provide an enduring experience significant to practice and effectiveness. The goal of this inquiry is to determine what led teachers to participate in the QM review process as Course Representatives, what about the experience they perceive as significant to professional development, and what about the rubric they find applicable to professional practice.

Chapter Two Preview

Chapter Two will include a literature review of the early history of K-12 virtual learning in the United States. Challenges for students and teachers in virtual learning environments and effective professional development to support teachers in the virtual learning environment will be synthesized. Standards and frameworks applied in online instructional practice and course design, specifically the QM rubric, will be described. The official course review process and its alignment to online professional development best practices and models will be described and provide context for the case study. Prior findings on the impact of the QM rubric in higher education settings and K-12 settings will allude to the potential findings of this research inquiry. Chapter Three will discuss the case study methodology applied for data collection and data analysis. Chapter Four will review inquiry findings and discuss major themes derived through data analysis. Chapter Five will compare study findings to prior research, discuss implications, and suggest future research. Table 1 below presents the key terms for this study.

Key Terms

Table 1*: Key Terms and Definition*

Term	Definition
Asynchronous	Correspondence in virtual learning environment that occurs without simultaneous interaction. Teachers and students may use tools such as discussion boards, email, or course messaging, and there is a time delay between interaction (VLLA, 2023; Wang, 2021)
Course Review Management System	The Course Review Management System (CRMS) is a sign-on system house on the Quality Matters™ (QM) website that allows a subscribing member to apply for an official QM review.
Digital Accessibility	A commitment to ensuring all web-based content, including online course materials, can be perceived by all students regardless of learning disabilities. Individuals with disabilities must be able to perceive the content fully, equally, and independently (VLLA, 2023; Web Accessibility Initiative, 2023)
Emergency Remote Teaching (ERT)	Instruction that moved fully online at a rapid pace because of crisis management and mandated school closures during a global pandemic (Gomez et al. 2022; Hodges et al., 2022).
K-12	Kindergarten through twelfth grade compulsory education which includes elementary and secondary education and culminates in a high school diploma (Arnesen et al., 2019).
Learning Management System (LMS)	A web-based platform for facilitating virtual learning. An LMS often provides an eco-system for virtual learning including a means for presenting and facilitating instructional content, a means for students to submit work, a means for teachers to maintain grades, and a means for students to interact with peers and teachers (Dindar et al., 2021; VLLA, 2023).
Master Course	A complete online course an organization provides to teachers or faculty to support standard design and instructional practice (Baldwin, 2019, Davis, 2018).
Online course design	The strategic process of creating web-based courses that can connect students and teachers (Quality Matters, 2022).
Online professional development	Professional development intended to prepare educators for work in fully virtual learning environments. The professional development often integrates practice, tools, and technology comparable to the environment in which teachers will teach their students (Rice & Dawley, 2007).
Quality Matters™ (QM) Course Representative	An individual from a respective organization seeking Quality Matters™ (QM) peer review course certification who serves as a point person for the peer review team (Quality Matters, 2022).

Table 2 (Continued)*: Key Terms and Definition*

Quality Matters™ (QM) Peer Review	An official Quality Matters™ (QM) review in which a three-member review team consisting of a Master Reviewer and two peer reviewers evaluates the design of a course using an official review system and the Quality Matters™ rubric (Quality Matters, 2022).
Quality Matters™ (QM) rubric	A course review rubric for fully online or blended courses consisting of eight general standards and 43 specific standards focused on overall course design quality (Quality Matters, 2022).
State-led virtual school	State virtual schools provide online courses, instructional, and professional development to schools and districts throughout the respective state. State virtual schools are often founded by state legislation or a state-level agency and receive operational funds from the state (VLLA, 2022).
Supplemental virtual school	A school that does not provide a diploma but offers course work intended to enhance a student's schedule and support credit requirements (VLLA, 2022).
Synchronous	Learning interaction that happens simultaneously using tools such as video conference rooms; the students and teachers may be separated geographically (VLLA, 2022).
Virtual learning	Learning that occurs using web-based tools that allow students and teachers to interact without geographic requirements. May also be used interchangeably with virtual learning (Watson & Kalmon, 2005; VLLA, 2022).
Virtual teachers	Teachers who instruct and connect with students in virtual environments, often using pre-designed curriculum.

CHAPTER TWO

Chapter two begins with an overview of early research in K-12 virtual learning and the establishment of K-12 virtual programs throughout the country. The needs of K -12 learners in the virtual learning environment and the instructional practice and professional learning demands to support student success are examined. Refined best practices resulting from the forced implementation of Emergency Remote Teaching (ERT) during the pandemic are synthesized. Standards for online quality, specifically the QM rubric are discussed. The QM rubric and its role in guiding online course design quality are explored (Quality Matters, 2023). The Course Representative process and its parallels with effective professional development for online educators are analyzed. Prior impact studies of QM in Higher Education settings and how the rubric is applied in K-12 course development are reviewed.

Purpose and Research Questions

This qualitative case study explored the perspectives of K-12 virtual teachers at a state-led supplemental school who share the common experiences of teaching online courses for a fully virtual program and serving as Course Representatives for organization-initiated QM course reviews (Creswell & Creswell, 2013). The study's findings aim to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. Additionally, the study may provide implications for professional development opportunities for virtual teachers and drive further research on the implementation of quality assurance frameworks to enhance educator practice. Three research questions guided this study and focused on the experiences and perspectives of teachers serving as Course Representatives before, during, and after a QM review including:

RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ 2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

Research on K-12 Virtual Learning Environments

Early Research in K-12 Online Instruction

As a result of national, state, and local policies and initiatives to expand virtual learning options for students, K-12 virtual programs launched across the country around the start of the millennium. K-12 programs took on a variety of forms including state-led or district-led supplemental virtual programs, single or multi-district cyber schools, and cyber charter schools (Barbour & Reeves, 2009; Cavanaugh, 2001; Cavanaugh, et al 2009; Hasler et al., 2014; Rice 2006; Rice, 2014; Smith et al., 2005; Watson & Kalmon, 2005; Watson & Murin, 2014). Virtual learning allows students to expand the learning environment beyond geographical boundaries and scheduling constraints (Cavanaugh, 2001; Barbour & Reeves, 2009; Cavanaugh et al., 2009; Harvey et al., 2014; Watson & Kalmon, 2005; Watson & Murin, 2014). Because virtual programs provide expanded course offerings, connect students and highly qualified teachers, and can raise the bar for quality education through the opportunity technology affords, early adopters perceived its promise to leverage educational inequities (Barbour & Reeves, 2009; Berge & Clark, 2005; Cavanaugh, 2001; Cavanaugh et al., 2009).

During the years of initial implementation, demand was strong, and virtual program start-ups began at a rapid pace throughout the country; however, best practices in K-12 virtual learning were not well established (Barbour, 2007; Ferdig et al., 2009). Anecdotal evidence from states (Watson & Kalmon, 2005) and emerging research discovered the learning support needs of K-12 students online, and the need for professional development focused specifically on supporting students in virtual programs (Archambault et al., 2022; Arnesen et al., 2018; Cyrs, 1997). Additionally, strategic course design and strategic instructional strategies centered around student success were found to be critical in the virtual environment (Cavanaugh et al., 2004; Barbour, 2011; Roblyer & Marshall, 2002).

K-12 Learner Needs in the Virtual Environment

Emerging research found that although virtual environments could provide students with access to high-quality teachers and coursework, they could introduce barriers to student success including device, connectivity, and technology experience inequities (Berge & Clark, 2005). Students, particularly

those in K-12 virtual environments, require consistent and reliable technology, structured learning environments, and support in learning how to learn online (Barbour, 2007; Lee & Figueroa, 2012; Lowenthal et al., 2020; Roblyer & Marshall, 2002; Weiner, 2003). Educators must anticipate providing support for learners in the virtual environment who have experienced academic and motivational challenges in traditional settings (Repetto et al., 2010; Rice & Carter 2015). Maintaining visibility and establishing a social presence can support learners who may disengage in online settings (Kipp & Rice, 2019). Furthermore, students enrolled in virtual schools, particularly supplemental programs intended to augment students' schedules by offering credit requirements not offered at an enrolling school or without time constraints and conflicts of a standard school schedule (VLLA, 2022), knowing who to reach out to at the supplemental level and the building level for support also becomes a concern (Barbour, 2022).

Learner engagement is another consideration for student success in the virtual learning environment. Engaged learners are more likely to enact behaviors that lead to success (Anderson, 2019; Curtis & Werth, 2015; Kipp & Rice, 2019; Siko & Barbour, 2022). Students who experience success and engagement in the traditional classroom setting are more likely to be successful and engaged in the virtual setting (Kipp & Rice, 2019; Roblyer, 2005; Roblyer & Marshall, 2002). Engagement can happen through student-centered design that allows learners to collaborate (Lee & Figueroa, 2012), communicate freely with teachers and peers (Muljana & Luo, 2019), and display cognitive mastery of academic achievement goals (Anderson, 2019).

Anderson (2019) identified three dimensions of student engagement: cognitive engagement, behavioral engagement, and affective/emotional engagement. Cognitive engagement involves the resources and skills students use when engaging in the classroom setting (Anderson, 2019). Cognitive engagement can involve how students use technology and devices to engage and build success. Behavioral engagement in the online classroom includes regular participation, such as logging in, accessing materials on a routine basis, and successfully completing activities (Anderson, 2019). Affective and emotional engagement pertains to how students feel when they are engaging in an activity or in the classroom setting (Anderson, 2019).

Multi-dimensions of student engagement may require multi-layered stakeholder support (Borup et al., 2020). Students benefit from collaborative support structures in which individuals at the building level, home level, and virtual level work together to fulfill students' best interests (Greer et al., 2014). Support from multiple angles can help students meet the technological, instructional, and social demands of virtual learning (Rice, 2006). Additionally, using tools and features that allow for real-time engagement and instant messaging communication can help build community even in the asynchronous learning environment, a dynamic in which students learn independently and not in real-time with classmates and teachers (Borup et al., 2014; Borup, 2016; Kiekel et al., 2019).

Differences Between Classroom and Online Best Practices

The right variables, including instructor presence, a well-designed curriculum, appropriate work environments, and networks of support to build learning and technology confidence, can lead to student achievement in the virtual environment (Roblyer & Marshall, 2004; Stone & Springer, 2019). The instructor plays a critical role in ensuring students receive the support to engage and succeed in the online classroom (Archambault et al., 2022; Bickle & Rucker, 2021; Kipp & Rice, 2019). Early implementation and research implied virtual teachers experienced several professional demands specific to the virtual environment. Virtual teachers must be highly qualified in a respective subject area and grade level, and they need specialized preparation and support to build instructional skills divergent from standard classroom practice (Archambault, 2010; Ames et al., 2021; Blomeyer & Cavanaugh, 2007; DiPietro et al., 2008, Samuel, 2022). They must demonstrate subject expertise, technology proficiency, and understand how technology can improve the delivery of specific content (Ames et al. 2021; Archambault, 2010; Barbour et al., 2014; Bütün, 2021; Davis et al., 2007; Dishon, 2022; Niess, 2005, Ntuli & Kyei-Blankson, 2016, Samuel, 2022). Virtual learning requires teachers to deliver instruction, build connections, administer assessments, provide learning experiences, and demonstrate classroom management strategies specific to the fully virtual environment (DiPietro et al., 2008; Duncan & Barnett, 2010). Additionally, virtual teachers often use multiple tools simultaneously to implement instruction and foster student connections (Blomeyer & Cavanaugh, 2007; Dishon, 2022). They often instruct in a Learning

Management System (Dindar et al., 2021) and create and adapt online tools and technologies (Archambault et al., 2022; Barbour et al., 2014; Beetham & Sharp, 2019; Cavanaugh et al., 2009; Davis et al., 2007; Ntuli & Kyei-Blankson, 2016).

In addition to mastering the tools and technology and aligning them to content delivery, teachers must support and engage students in the virtual learning environment (DiPietro et al., 2008; DiPietro, 2010). To support and engage students, teachers must demonstrate virtual presentation skills, collaboration techniques, and questioning strategies to effectively reach students in the virtual learning environment (Cyrs, 1997). However, preemptively planning for engaging learning experiences is only one consideration. Discerning what presents as student engagement and disengagement in the online classroom is another, and discerning engagement may be complex and multi-layered (Bergdahl, 2022; Bergdahl & Bond, 2022). Engagement may present as logging in and making good grades; however, the multi-dimensional aspects of engagement including how students interact with the content and socially engage with peers and teacher in the virtual environment may be more challenging to discern (Anderson, 2019; Bergdahl, 2022; Bollinger & Martin, 2018; Borup, 2016; Borup et al., 2014; Deng et al., 2022; Hollingshed, 2022). Being able to discern how engagement or disengagement manifests in the virtual environment is essential to fostering student relationships, interest, and participation in virtual environments (Bergdahl, 2022; Bergdahl & Bond, 2022).

Beyond providing engaging experiences and monitoring student engagement, building virtual connections becomes a part of the classroom management aspect of the virtual environment. Educators must communicate with students, often exclusively through online tools (Dindar et al., 2021; Moore-Adams et al., 2016). Online pedagogy and connection routines should foster a connective learning environment and provide a viable proxy for the visual cues, physical proximity, and real-time interaction of a brick-and-mortar classroom environment (Rozitis, 2017).

Legal and ethical considerations are also areas of concern, including providing web-based resources according to fair use and copyright requirements. Kimmons (2014) shared educators may have false confidence about their understanding of the appropriate use of Open Educational Resources (OER)

and copyright and fair use guidelines. Specific training regarding OER resources, copyright, and fair use online may assist teachers in the proper use of digital materials (Kimmons, 2014). Additionally, teachers must apply digital accessibility guidelines and protect learner privacy and safety online when procuring, presenting, and creating virtual learning resources (Cavanaugh et al., 2009).

The 24/7 nature of the virtual environment also presents context-specific time management challenges for teachers. Research reveals because of the strenuous workflow of a virtual environment, teachers need support managing time and setting professional priorities (Farmer & West, 2017). Additionally, supporting students working asynchronously and independent of immediate interaction presents further management challenges for teachers in virtual programs (Borup et al., 2014; Borup, 2016; Kiekel et al., 2019).

Professional Development for Online Practice

The variations between virtual environments and classroom environments present several considerations for effective professional development and support for teachers. Because online teaching includes distinct skills, experiences, and standards, it also requires distinct professional development and professional competencies for educators (Archambault et al., 2022; Davis et al., 2007; Kearsley & Blomeyer, 2004; Storandt et al., 2012, Samuel, 2022). Foremost, teachers, regardless of their prior teaching experience, require some form of ongoing professional development to succeed online (Rice & Dawley, 2009). Rice and Dawley's (2009) national survey of teachers and administrators revealed throughout various virtual program models including full-time enrollment programs, supplemental enrollment programs, district-led programs, and charter programs, between 83.3% and 92.7% of the teaching faculty received some sort of professional development targeted at online instructional practice prior to or during their initial online instructional experience. The content focus and the method of delivery of professional development should also vary depending on program and educator goals (Rice & Dawley, 2009).

Desimone (2011) identified core features of professional development including content focus, active learning, coherence, duration, and collective participation. Dawson and Dana (2014) aligned

Desimone's core features with effective professional development designed to prepare teachers for online instruction. Dawson and Dana (2014) applied content focus and the defined roles and responsibilities of stakeholders in virtual learning to Desimone's framework. Additionally, they noted professional development for online instruction should involve active learning and use the variety of multimedia formats educators would use with students in a virtual environment (Dawson & Dana, 2014). Further, Dawson and Dana (2014) suggested professional development be clear and coherent and coincide with prescribed educator standards for online practice. Moreover, professional development should blend shorter and longer learning opportunities and focus on technical skills and best practices for teaching online, and the methods of delivery for professional development should involve collective and collaborative participation (Barbour et al., 2014; Dawson & Dana, 2014). Rice & Dawley (2009) also revealed the preference for practical, just-in-time professional development that blended technology skills along with tacit pedagogical skills, including how to meet the needs of diverse learners and build community in the virtual learning environment.

Professional development designed to prepare teachers to teach online should emphasize the unique nature of the fully virtual environment (Archambault et al., 2022; Ames et al., 2021; Archambault, 2010; Archambault & Kennedy, 2014; Cyrs, 2007, Dawson & Dana, 2014; Rice & Dawley, 2009, Samuel, 2022). Emphasizing virtual learning theory and the psychological aspect of teaching online is imperative to both pre-service and in-service teachers (Rice & Dawley, 2009). Additionally, ongoing professional development for virtual teachers should distinguish between online *teaching* and online facilitation (Archambault et al., 2022). While the craft of teaching emphasizes relationship building, guidance toward mastery, and strategies to support personalized learning and engagement with students, these factors take on a different form in the virtual environment (Archambault et al., 2022; Ames et al., 2021; Archambault, 2010; Archambault & Kennedy, 2014, Samuel 2022). Furthermore, learning that is not time or geographically-bound often requires professional development emphasizing organizational skills and time management in a fully virtual environment (Farmer & West, 2017). Additionally, given the consistent use of multimedia in a fully online environment, teachers benefit from educative

experiences that allow them to select and activate curriculum materials in fully online learning environments (Davis & Krajcik, 2005).

Research presents the correlation between student success and student engagement in virtual learning; therefore, understanding how to engage learners online is an essential skill of effective online K-12 teachers (Anderson, 2019; Bergdahl, 2022; Bergdahl & Bond, 2022). However, Bergdahl (2022) indicates engagement is a complex phenomenon that presents challenges based primarily on emotions versus cognition. The qualitative research findings imply teachers recognize when students are disengaged, but teachers need more professional support to better understand how to intervene when students do disengage (Bergdahl, 2022).

Furthermore, since virtual learning is dependent on technology skill and application, professional development for virtual teachers should incorporate strategies for integrating technology and facilitating instruction in a Learning Management System (LMS) (Dikkers, 2015; Rice & Dawley, 2009). Not only should teachers master the tools, technology, and an LMS themselves, but they also need professional preparation to support students through technology challenges. Teachers benefit from professional development focused on addressing technology inequities and managing situations where tools or technology may fail or become unreliable for students (Hughes & Morrison, 2023). Teachers themselves may require ongoing professional development to address technology concerns, pedagogy support, instructional design guidance, and administrative guidance (Barbour et al., 2014; Davis & Krajcik, 2005; Farmer & West, 2017; Kearsley & Blomeyer, 2004). Teaching with technology starts at the skill level by addressing task-specific problems and then through contextual application and enactive practice, which builds confidence and advances educator skills (Ferdig et al., 2009; Gomez et al., 2022).

Teachers learn by doing and need to develop flexible knowledge bases to truly achieve teaching expertise. Not only is the content focus of effective professional development for virtual teachers varied, but the method of delivery should also offer variety. Teachers and leaders prefer flexible delivery of professional development including in-person training, online course work, opportunities to learn through social networks, direct mentorship, and customizable opportunities depending on the content and

individual teacher (Morrison & Hughes, 2023; Rice & Dawley, 2009; Trust & Horrocks, 2017). Many classroom teachers transition immediately to online or work online and in the classroom simultaneously and research has confirmed a combination of delivery modes and sustained duration of professional development is beneficial (Farmer & West, 2017; Larson and Archambault, 2019).

New technologies continue to create opportunities for designing and delivering content for instructional and learning purposes (Al-Harthi et al, 2018; Bai, 2019; Ertmer, 2005). However, new technological opportunities bring about novel challenges. The virtual environment will always be dynamic, and successful teachers will need to constantly refresh technology and pedagogy skills and experience (Dishon, 2021). Teachers need to know how to set the stage to help students, whether for in-person, online, or remote teaching (Al-Harthi et al, 2018; Gomez et al., 2022). Ongoing training, opportunities to learn by doing, and opportunities to experience virtual learning as students themselves can benefit teachers as they build and maintain the capacity to teach students fully online (Archambault et al., 2022; Archambault & Larson, 2015; Larson & Archambault, 2019). Frameworks and technical guidance, including the QM rubric may support professional development designed to guide online practice.

Takeaways from the Pandemic and Emergency Remote Learning

During the early years of K-12 research and implementation, it was common to define preferred learner attributes such as autonomy, time management skills, a clear locus of control of the surrounding environment, prerequisite technical skills, and a strong sense of academic integrity (Cavanaugh et al., 2004; Lee & Figueroa, 2012; Lowes & Lin, 2015; Rice, 2006). However, the needs of students who might face challenges including learning disabilities (Hirsch et al., 2022), language learning factors (Hernandez et al., 2021), historical underrepresentation (Rigaud et al., 2022), and consistent access require additional pedagogical considerations (Baker & Fitzpatrick, 2022; Crouse & Rice, 2018; Greer et al., 2014; Repetto et al., 2010; Vasquez & Serianni, 2012) While research of how to meet the needs of diverse learners did emerge following the broad establishment of K-12 virtual schools, COVID-19 and forced-implementation

of emergency remote teaching (ERT) presented unprecedented challenges for educators (Eadens et al., 2022; Francom et al., 2021; Leech et al., 2022).

Although researchers and virtual learning leaders strive to distinguish between Emergency Remote Teaching (ERT), which evolved as a part of crisis management, and sustainable virtual learning, which involves strategic planning and the orchestration of an online eco-system to support learners (Gomez et al. 2022; Hodges et al, 2022), some challenges uncovered during ERT could also apply to sustained virtual environments. Equity challenges, particularly regarding technology access, student support, and diverse learner needs, including providing for digital accessibility, came into sharp focus during the pandemic (An et al. 2021, An et al., 2022; Arnett, 2021; Czerniewicz et al., 2020; Flynn, 2020; Friedrich & Perotta, 2022). Showing empathy, accounting for the emotional trauma students were experiencing, and providing for the social support that learners would be more likely to receive in a traditional brick-and-mortar environment were important considerations during worldwide school closures (Flynn, 2020; Rigaud et al., 2022; Siko & Barbour, 2022).

As the reach of fully virtual learning expanded during the pandemic, additional professional learning and student and teacher support concerns pressed education leaders (Arnett, 2021; Eadens et al., 2022, Francom et al., 2021). Arnett (2021) conducted a survey of teachers and administrators across the nation to capture instructional practices that were applied during the pandemic. The survey revealed that prior to the pandemic, only 16% of teachers taught online on a regular basis. During the fall of 2020, that percentage increased to 83% (Arnett, 2021). Arnett (2021) found that during the pandemic, many educators tried to replicate what they were already doing in the classroom remotely instead of using the shift as an opportunity to innovate with technology. Although students have since returned to the classroom, blended, hybrid, and fully virtual learning options remain, and educational leaders must reassess how technologies are adopted and administered so the prime focus of educational innovation centers around student learning (Arnett, 2021). Arnett (2021) suggests educator micro-credentialing can lead to more student-centered online practices.

The pandemic blurred distinctions between in-person and virtual learning (Anderson, 2021). It also exposed inequities regarding technology and quality curriculum access (Rigaud et al., 2022; Siko & Barbour, 2022). The days of preferred learner attributes and the virtual environment being a niche interest passed, and an educator's ability to seamlessly shift instruction online presented a new reality of teaching (Hodges et al., 2022). Continuing to provide guidance so educators can meet the needs of diverse learners in virtual environments is of paramount importance. Standards and frameworks such as the QM rubric that are derived from collaborative research may be able to provide appropriate direction for virtual program leaders.

Collaborative Networks and Standards for Online Instruction

As virtual schools and programs saw rapid growth in the first decade of the 21st century, state policymakers probed how virtual programs were performing (Rice, 2014). Since the late 20th century, accountability measures, often in the form of content area standards have become an integral part of educational policy in America (Rice, 2014). Policy, coupled with research, drove initiatives to draft standards for K-12 online education practice including the International Society for Technology Education (ISTE) standards and the National Standards for Quality (NSQ) Online Teaching.

K-12 Collaborative Networks and Instructional Standards

The International Society for Technology Education (ISTE) began in 1978, a few decades ahead of the K-12 virtual education boom, as a collaborative organization of K-12 and university educators with common beliefs about technology in education (ISTE, 2023). ISTE established educator standards focused on how educators can help empower students through technology (ISTE, 2023). The standards define a teacher's position in transformative technology practice as a blend of interrelated roles, including Learner, Leader, Citizen, Collaborator, Designer, Facilitator, and Analyst (ISTE, 2023). While not specific to fully online schools, the ISTE standards provide a technology implementation framework for educators, and states across the nation have adopted the standards for their own digital learning plans (Ellis et al., 2021, ISTE, 202; NCDPI, 2023). Many states also provide guidance on educator competencies that align with ISTE and include skills that teachers and leaders should demonstrate to

create effective digital learning environments and apply digital competencies in subject-specific areas (Rice & Bailon, 2022).

Another set of standards often applied in virtual learning programs is the National Standards for Quality (NSQ). The NSQ standards are grouped into standards for course design, program design and operations, and teaching (NSQ, 2022). The standards were drafted in 2007 through a collaboration between the North American Council for Virtual learning (iNACOL) and the Southern Regional Education Board (SREB). While ISTE was intended to provide research and standards for technology integration (ISTE, 2023), iNACOL research and advocacy focused specifically on fully virtual learning environments (Aurora Institute, 2023). The standards for online teaching provide guidance and flexibility for adopters and include eight standard categories: Professional Responsibilities, Digital Pedagogy, Community Building, Learner Engagement, Digital Citizenship, Diverse Instruction, Assessment and Measurement, and Instructional Design (NSQ, 2023).

The NSQ Teaching standards include indicators with explanations and examples, providing clarity on certain indicators that may be variable depending on the setup of a program (NSQ, 2023). The standards are continuously revised to integrate best practices and have since transitioned to the oversight of the Virtual Learning Leadership Alliance (VLLA), a collaborative of supplemental virtual programs across the country, QM (VLLA, 2023, NSQ, 2023), and the Digital Learning Collaborative (DLC), a membership community focused on the dissemination of research and advocacy for digital learning (NSQ, 2023; DLC, 2023).

While ISTE provides specific standards for educators, and NSQ has distinguishing standards for teaching, courses, and programs, QM focuses specifically on course design. Online instruction strategies and frameworks often include course design components. For instance, “Designer” is one role distinguished in ISTE’s standards for educators (ISTE, 2023). Additionally, the NSQ standard focuses on Instructional Design and emphasizes how teachers design learning experiences for students (NSQ, 2023). However, it is important to note that NSQ’s Instructional Design Standard and its clarifying standards are considered optional as “instructional design does not always fall under online teaching responsibilities”

(NSQ, 2023). Course design emphasizes what takes place to preemptively plan and design a virtual curriculum. Yang distinguishes instructional strategies, actions such as posting announcements, sending email reminders, providing feedback, grading for students, and interacting with students from instructional design which often takes place preemptively from instruction and focuses on the design and authorship of a virtual curriculum (Yang, 2017).

The Quality Matters™ Rubric

QM supports quality assurance for online courses and develops and maintains rubrics for Higher Education and K-12 learning environments (Quality Matters, 2022). QM rubrics were created to guide educators and programs in the development, evaluation, and improvement of online courses and present frameworks specific to course design. The K-12 rubric was first released in 2010 based on collaborative input from online educators and instructional designers (Quality Matters, 2022). The K-12 rubric, currently in its fifth edition, is organized into eight General Standards and 43 Specific Review Standards. The eight General Standards present an element of online course design:

- General Standard 1: Course Overview and Introduction
- General Standard 2: Learning Objectives or Competencies
- General Standard 3: Assessment and Measurement
- General Standard 4: Instructional Materials
- General Standard 5: Learning Activities and Learner Interaction
- General Standard 6: Course Technology
- General Standard 7: Learner and Instructor Support
- General Standard 8: Accessibility and Usability (Quality Matters, 2022).

A distinguishing feature of the QM rubric is the alignment among the course components (Quality Matters, 2022). Learning objectives (General Standard 2), assessments and measurement (General Standard 3), instructional materials (General Standard 4), learning activities and learning interaction (General Standard 5), and course technology (General Standard 6), all work together to guide

student outcomes (Quality Matters, 2022). Each General Standard is broken down into several Specific Review Standards that identify precise course criteria. Each Specific Review Standard includes annotations that provide examples of course components that can meet the specific standard. For instance, General Standard 2 focuses on Learning Objectives and is broken down into four Specific Review Standards. Specific Review Standard 2.1 focuses on course-level learning objectives. Specific Review Standard 2.2 focuses on module or unit-level learning objectives. Specific Review Standard 2.3 evaluates whether the course objectives align with state standards or other required standards such as Advanced Placement standards. Specific Review Standard 2.4 addresses whether the objectives are written for the target student audience (Quality Matters, 2022). The annotation for Specific Review Standards 2.3, suggests one way the course can meet Specific Review Standard 2.3 is if the course worksheet includes a comprehensive alignment chart that demonstrates congruence between the course objectives and the prescribed standards for the course (Quality Matters, 2022).

Each Specific Review Standard is categorized as Essential, Very Important, or Important. The categories align with the rubric scoring system as each Specific Review Standard receives a set number of points. The Essential Specific Review Standards are valued at three points, and each essential standard must be met to earn certification. Very Important Specific Review Standards are worth two points, and Important Specific Review Standards are worth one point (Quality Matters, 2022). The two-point and one-point standards are not required to meet QM certification; however, a course must receive a total of 94/111 points to receive official Quality Matters distinction (Quality Matters, 2022).

The QM Peer Review Process

Prior to submitting a course for official review, a QM subscribing organization must designate a Course Representative, an individual responsible for preparing a course for peer review. Although QM does not provide official training for Course Representatives, QM defines several responsibilities for Course Representatives before, during, and after a peer review (Quality Matters Course Representative Description, 2020). Prior to a review, the Course Representative may prepare the course ahead of time and customize the course to convey instructor presence through welcome announcements and course and

teacher orientation materials. Course Representatives must also complete the course worksheet, detailing the design and setup of the course in an online Course Review Management System (CRMS) (Quality Matters Course Representative Description, 2020). Populating the course worksheet often requires the teacher to carefully evaluate the course in areas such as alignment, learner interaction, learner support, and digital accessibility. Additionally, a Course Representative enrolls the peer review team into the course and serves as a point of contact for the review team during a QM review (Quality Matters Course Representative Description, 2020).

During an official review, a QM review team led by a Master Reviewer who has received training on the K-12 rubric, the peer review process, and the master reviewer process will lead a team consisting of a peer reviewer and subject matter expert (SME) reviewer, each trained in the rubric and the peer review process. The SME reviewer is also certified in the content area of the course under review (Quality Matters, 2022). During a three-week course review period, each member of the review team will individually evaluate the course and then meet to discuss before the Master Reviewer submits the final report. As questions arise, the Master Reviewer may reach out to the Course Representative for clarity. To receive official QM certification, the course must demonstrate each Specific Review Standard within an 85% threshold to receive a distinction of "Met" from each reviewer (Quality Matters, 2022). The one exception is standard 2.3, which focuses on state or accepted standards alignment, which must be met at 100%. Annotations in the CRMS provide guidance on how a Specific Review Standard can be fulfilled. The annotations are available only to subscribing QM members (Quality Matters, 2022). To earn points for a Specific Review Standard, two or more members of the three-person review team must determine a standard as "Met." If two or more reviewers determine a standard is "Not Met," no points are earned for that standard (Quality Matters, 2022). Reviewers must provide evidence to determine if a course meets or does not meet a specific standard, and reviewers must provide clear suggestions for improvement if a specific standard is not met.

After a review is complete, a Course Representative must review the report and submit an outcome response form in the CRMS (Quality Matters Course Representative Description, 2020). If a

course does not pass a review, the Course Representative and subscribing virtual organization initiating the review have the option to place the course through amendment. During the 14-week amendment phase, the Course Representative must review the suggestions for improvement and revise the course based on feedback. Once the updates are complete, the Course Representative completes an amendment form and prompts the master review to review course updates and determine final approval (Quality Matters Course Representative Description, 2020).

In addition to individual course reviews, subscribing organizations may apply for a Template Review (Quality Matters™, 2024). Organizations intending to submit five or more courses for review and follow a template across course disciplines can apply for a Template Review to allow for cost and efficiency benefit (Quality Matters™, 2024). Template Reviews emphasize 15 Specific Review Standards that you would expect to see across program courses in areas like the course overview and introduction (part of General Standard One), course technology (part of General Standard Six), learner support (all General Standard Seven), and accessibility (part of General Standard Eight).

The review process is intended to guide continuous improvements to promote student success in online courses, and QM acknowledges the subjectivity of an outside peer review through underlying principles (Quality Matters, 2022). While the rubric includes specific standards and criteria, the review process is intended to be a part of a continuous cycle of improvement; centered on research and student learning; collegial, as opposed to diagnostic or judgmental; and collaborative, not only in terms of the review team but in terms of flexible application of the standards (Quality Matters, 2022).

K-12 Teachers Serving as QM Course Representatives

State-led virtual programs, including schools in the VLLA, implement instructional standards such as NSQ or ISTE standards to guide instructional practice and teaching quality, and they also submit online courses to QM to ensure online course quality (VLLA, 2022). The common VLLA practice of ensuring quality at the instructional and course design levels, respectively, concurs with research findings. Strong instructor presence and a well-designed course, specific for fully online delivery, provide the best experience and outcomes for students (Schmidt et al., 2013; Stone & Springer, 2019).

To support QM initiatives, state-led, supplemental, K-12 virtual programs often rely on an online teacher pool to serve as Course Representatives. Serving as a Course Representative and preparing a course for review can stretch the demands of virtual teachers as they must balance course design-focused tasks along with the strenuous responsibilities of teaching online (Farmer & West, 2017, Quality Matters™, 2022). Daily teaching responsibilities include engaging students online, monitoring student progress, maintaining records, and establishing professional communication streams with students and stakeholders (Larkin et al., 2016). Since QM does not provide official training for Course Representatives but does define roles and responsibilities, subscribing programs may provide their own internal training to support teachers serving as Course Representatives. Although participating as a Course Representative presents time and professional commitment requirements for both the teacher and the organization, the process has the potential to provide effective professional development for teachers and build online educator expertise. Adair (2017) suggests building a community of individuals with QM expertise can support broad and sustainable implementation.

Ali & Wright (2017) propose a pyramid-style online faculty professional development model specifically aligned with QM program initiatives. The model suggests ongoing QM implementation and support could build educator commitment to effective online practice and provide a sustaining professional development experience for online faculty. Although originally designed for Higher Education faculty, Ali and Wright's (2007) model provides implications for K-12 teachers who might serve as Course Representatives for organization-managed master courses. The framework presents the progression of educator commitment throughout QM implementation and provides implications for the possible impact of the Course Representative experience on a teacher's professional practice. See Figure 1 introduced in Chapter 1.

At the base of the pyramid framework is industry standard preparation (Ali & Wright, 2017). QM provides a prescribed eight General Standards and 43 Specific Review Standards rubric for peer review. QM does not provide official Course Representative training, but it does specify responsibilities for Course Representatives, including preparing a course for review, submitting a course worksheet that

presents course specifications and alignment, and serving as a point of contact for an external review team (Quality Matters™, 2022). To support understanding of these responsibilities and the rubric overall, state-led virtual programs may provide a high-level orientation of the rubric and the overall course review process for teachers supporting QM reviews. The program-furnished training, which introduces Course Representative responsibilities and an overview of the rubric, functions as industry-standard preparation. Teachers commit to learning the rubric and peer review process and serve as Course Representatives for a respective organization.

The second layer of Ali & Wright's model emphasizes professional self-reflection. As Course Representatives, teachers prepare an online course for external review, populate the course worksheet, and address questions from the review team. If the course does not meet standards, Course Representatives may potentially adjust course content based on peer review feedback and submit a course amendment (Quality Matters™, 2022). While teachers may have experience teaching from an organization-managed master course, they may not have design experience or a thorough understanding of course content elements. The Course Representative experience emphasizes the unique nature of the virtual learning environment (Archambault et al., 2022; Ames et al., 2021; Archambault, 2010; Archambault & Kennedy, 2014; Cyrs, 2007, Dawson & Dana, 2014; Rice & Dawley, 2009). It may also require teachers to push in curriculum materials in the event a course does not fulfill all rubric criteria. The opportunity to immerse in an online curriculum and reflect on the multimedia provided to support learning may provide an educative learning experience for teachers (Davis & Krajcik, 2005), compelling teachers to consider how the curriculum materials of their fully online course support learning and empowering them to build their subject expertise and technology expertise to inform course improvements (Davis & Krajcik, 2005). Additionally, if the course does not pass the review the first time, teachers may adjust content based on peer review feedback and submit a course amendment (Quality Matters™, 2022). Course updates that might occur during a course review amendment might provide further educative experiences as teachers consider enhancing their course curriculum and providing updated materials that meet review requirements and align with stated goals and objectives (Davis &

Krajcik, 2005). Furthermore, throughout the Course Representative process, teachers commit to reflection on external perceptions of overall course quality and their own conceptual understanding of the fully virtual learning experience (Ali & Wright, 2017).

The third layer of online professional development involves an awareness of institutional resources (Ali & Wright, 2017). Each peer review presents distinct variables including the contents of the respective course, peer review team subjectivity, and the experience of the teacher acting as a Course Representative. To address variability and situational concerns, a mutual commitment is required between the virtual program and the teacher to seek out and provide resources that ensure a successful review outcome. Additionally, serving as a Course Representative involves professional focus, commitment, and time, factors online teaching already demands (Farmer & West, 2017). Furthermore, in supplemental programs where a teacher's primary role is instruction and not course design, teachers may face novel challenges and engage in a "productive struggle" (Trinter & Hughes, p. 4, 2021) as they inform curriculum improvements and consider how a familiar online course might be viewed by an outside team of reviewers. Engaging teachers in a novel challenge and productive struggle compels teachers to work closely with their program and seek out institutional resources to ensure they can balance primary instructional responsibilities with a successful peer review. This mutual commitment to support the process and address concerns specific to the individual Course Representative, individual course, and individual review may continue after the peer review is finalized. As teachers seek out resources to support the review, they may uncover resources that also support professional practice (Ali & Wright, 2017).

The fourth layer at the peak of the pyramid involves a professional applying new knowledge and skills. The full process, from preliminary training, pre-review, active review, intermittent support, and post-review, provides the potential for an enduring professional development endeavor for teachers (Ali & Wright, 2017). As teachers engage with the course and participate as Course Representatives, they build a broader conceptual understanding of the fully virtual learning environment (Adair & Shattuck, 2015), which may enrich professional practice, including daily instruction.

Extending through the length of the online faculty professional development pyramid is teacher commitment. Commitment builds throughout the professional development experience (Ali & Wright, 2017). Teachers commit to industry-standard preparation as they learn about the process and the rubric. Throughout the Course Representative process, teachers commit to self-reflect on personal perceptions of a course and how these perceptions compare to external perceptions from a peer review team. Teachers and organizations commit to leaning into and providing resources to support the process. After a peer review, teachers may continue to commit to quality online instruction and support of strong course design long after a peer review concludes (Ali & Wright, 2017).

Additionally, the Course Representative experience may present attributes of effective professional development for virtual teachers such as the opportunity to complete authentic tasks in an environment like the one in which they instruct (Archambault et al., 2022; Davis et al., 2007; 2022; Dawson & Dana, 2014; Kearsley & Blomeyer, 2004; Gomez et al., 2022; Rice & Dawley, 2009; Storandt et al., 2012, Samuel, 2022). Moreover, the experience requires teachers to apply technology skills and address scenarios unique to the fully virtual environment (Gomez et al., 2022).

Furthermore, teachers' understanding of QM rubric criteria gained during the peer review process might complement daily online instructional practice in the form of clear delivery of instruction, deliberate teacher presence, alignment between daily instruction and pre-designed coursework, intentional support for student-facing instructional tools and technologies, and adherence to accessibility guidelines in daily instruction. Table 2 below presents the congruence between QM's course design standards and research recommendations for effective online instructional practice.

Table 3*: Congruence between General Standards and Effective Online Instructional Practice*

QM General Standards	Effective Online Instructional Practice
General Standard One: Course Review and Introduction (Quality Matters™ K-12 Rubric 5th edition, 2020)	Provide structure and support to onboard students; emphasizing how to learn online (Barbour, 2007; Lee & Figueroa, 2012; Lowenthal et al., 2020; Roblyer & Marshall, 2002; Sun & Rogers, 2022; Weiner, 2003).
General Standard Two: Learning Objectives Competencies, General Standard Three: Assessment and Measurement, General Standard Four: Instructional Materials, and General Standard Five: Activities and Learning Interaction (Quality Matters™ K-12 Rubric 5th edition, 2020)	Provide daily instruction, feedback, and personalized learning experiences that align with course content (Cyrs, 1997, Rozitis, 2017).
General Standard Five: Learner Activities and Learner Interaction (Quality Matters™ K-12 Rubric 5th edition, 2020)	Provide instructor presence and opportunities for students to engage with peers and teachers (Anderson, 2019; Curtis & Werth, 2015; Kipp & Rice, 2019).
General Standards Six: Course Technology and General Standard Seven: Learner Support (Quality Matters™ K-12 Rubric 5th edition, 2020)	Demonstrate proficiency in applying course tools, technologies, and procedures to support learner experience (Borup et al., 2014; Borup, 2016; Kiekel et al., 2019; Rice, 2006; Shattuck, 2014; Sun & Rogers, 2022)
General Standard Eight: Digital Accessibility (Quality Matters™ K-12 Rubric 5th edition, 2020)	Provide supplemental daily instruction that supports digital accessibility (Cavanaugh et al., 2009).

Whether the Course Representative experience provides an effective professional development opportunity for teachers that transfers to online instructional practice is not well defined. Additionally, whether the rubric focused on course design impacts *instructional* practice is also indeterminate. Nevertheless, implementation of QM initiatives among state-led, K-12 educators is prominent (VLLA, 2022). Evaluating the merit of QM initiatives can guide virtual educational leaders in future implementation of the rubric to ensure program quality. When used in conjunction with standards for teaching, rubric application might improve program effectiveness, overall, specifically educator effectiveness.

Quality Matters™ in Practice

QM Impact Studies in Higher Education

Although focused on course design, studies conducted in Higher Education settings have implied QM can impact online communities, online instructional practice, and virtual programs in a general sense and may provide implications for K-12 virtual programs that implement instructional standards, professional learning models, tools, technologies, and processes comparable to institutions of higher learning. Finley (2015) focused on the experiences of faculty in a community college setting and noted the application of the rubric forces faculty to evaluate how online course components align. Finley (2015) concluded that faculty apply the rubric to improve student experience in areas such as accessibility, alignment, and transparency. Finley (2015) suggested that even in institutions without organizational QM subscriptions, faculty make a personal investment in QM as QM can improve courses and student success and satisfaction (Finley, 2015). This may suggest QM benefits the whole teaching and learning experience beyond course design.

Simunich et al. (2022) conducted a mixed-methods study combining a quantitative survey and qualitative interviews of QM implementation leaders at 109 United States higher education institutions. The study revealed quality assurance initiatives, such as implementing the QM rubric, do require institutional support and leadership for implementation. Simunich et al. (2022) examined minimal professional development requirements, organizational goals, and the role of implementation leaders in successfully adopting a quality assurance model that blends internal review with formal QM reviews. The study found strong leadership, flexible policies, institutional processes for support, and shared institutional goals contributed to the successful implementation of quality assurance frameworks, including QM initiatives, throughout an institution (Simunich et al., 2022). This may imply successful QM implementation requires commitment from multiple parties throughout a program and its application may have a holistic effect on program quality.

Cowan et al. (2017) made similar suggestions about organizational implementation. Cowan et al. (2017) suggest QM focuses on collaborative, collegial, and continuous improvement processes, and QM

influences a “community of practice” (p. 43) or a group of individuals building knowledge through shared practice. Cowan et al. (2017) conducted a Social Network Analysis to examine the connections among individuals in a network. Additionally, they deployed a survey as a follow-up to organization-initiated QM training at a midsize Midwestern public institution. The survey asked participants to identify their location, role, rank, experience with virtual learning, and expertise. Cowan et al.’s survey also provided a roster of current and prior participants who completed the training and asked participants to identify interactions including: “Someone I have worked with to develop online content” (Cowan et al., p. 46, 2017). “Someone I have worked with on Quality Matters” (Cowan et al., p. 164, 2017). “Someone I would seek advice from for an online course” (Cowan et al., p 164, 2017). The findings suggested relational networks among faculty improved organization-wide QM implementation to improve overall distance education support (Cowan et al., 2017). The overall study suggested that in an organizational setting, community and networks can improve practice, implying that training select educators on the QM rubric could result in a “community of practice” (p. 43) committed to overall online quality (Cowan et al., 2017).

Other studies in Higher Education settings have aligned QM to instructional frameworks. Bogle et al. (2009) researched the application of the QM rubric for course design along with the application of Garrison et al.’s (1999) Community of Inquiry (CoI) framework for instructional implementation in blended courses that combined seated instruction along with virtual learning. Swan et al. (2012) used a pre/post-test quasi-experimental design with the independent variables of an online course meeting QM approval and receiving course updates according to the CoI framework. The CoI framework presents virtual learning as supported by three presences: social presence, teaching presence, and cognitive presence (Garrison et al., 2000 as cited in Swan et al., 2012). Bogle et al. (2009) reported faculty observed improved learner satisfaction. Swan et al. (2012) found that the combination of a well-designed course that meets QM standards and community-informed continuous improvements based on the CoI framework throughout implementation could result in stronger outcomes

Sheets et al. (2023) suggest the rubric culminates several instructional design best practices including Backward Design, which involves aligning all assessment and instruction around desired objectives or outcomes (Wiggins & McTighe, 2005 as cited in Sheets et al., 2023), the Universal Design for Learning which emphasizes multiple means of engagement, action and expression, and representation (Center for Applied Special Technology, 2018 as cited in Sheets et al., 2023), and the Community of Inquiry (CoI) framework into a single tool (Garrison et al., 2000 as cited in Sheets et al., 2023).

Crews and Wilkinson (2015) aligned the QM rubric with Chickering and Gamson's (1987) seven principles for good practice in undergraduate education. Chickering and Gamson (1987) first proposed the seven principles in an American Association for Education bulletin, and since then, the principles have been extensively published, studied, and cited in higher education research (Chickering & Gamson, 1999). The principles identify strong practice in undergraduate education and include: "Encourages Contact Between Students and Faculty…Develops Reciprocity and Cooperation Among Students…Encourages Active Learning…Gives Prompt Feedback…Emphasizes Time on Task… Communicates High Expectations... and Diverse Talents and Ways of Learning" (Crews & Wilkinson, p. 3,1987). To align the principles with the QM rubric, Crews and Wilkinson deployed a survey to higher education and asked participants to review specific QM rubric standards and categorize them based on the seven principles. The findings revealed that faculty found high alignment between several Specific Review Standards and several principles of good teaching. Over 96% of the participants reported that Specific Standard 1.7 focused on the "self-introduction" of the instructor aligned directly with the principle of "encourages contact." One of the specific accessibility standards, 8.2, was reported by over 93.1% of the participants to align with the "respects diverse talents" principle. Specific standard 6. 2, focused on course tools and media support aligned with "encourages active learning" according to 88. 2% of the participants. Crews and Wilkinson concluded that as faculty become aware of QM and good design, they become aware of how a well-designed course influences the teaching experience. (Crews & Wilkinson, 2015).

Studies have also examined whether QM-focused professional development has impacted faculty design and pedagogical practice in the higher education setting. Kearns and Mancilla (2017) researched whether QM workshops impacted pedagogical practice in a Higher Education setting and whether faculty report pedagogical changes because of QM experience. The qualitative interview study found that a QM approach led to faculty incorporating more resources in daily teaching, reorganizing online instruction in a more linear and logical way, considering the learner experience in the virtual environment, and improving overall alignment in online courses (Kearns & Mancilla, 2017). Similarly, the Abouelftouh & Alsharidah (2022) study implied the importance of professional development for faculty when implementing QM and quality course design expectations. The mixed-methods study implied, professional development focused on high-quality course design was essential for faculty when applying high quality course design principles and the QM rubric. Additionally, Conklin et al. (2020) explored the results QM-focused professional development had on faculty course design and practice. Instructors were most likely to make modifications focused on ease of use (General Standard 1), learner engagement (General Standard 5), and learner support (General Standard 7) after completing professional development (Conklin et al., 2020).

Research has also examined the student experience and student outcomes when the rubric is applied in Higher Education settings. Harkness (2015) conducted a case study to describe the strategic implementation of expanded online course offerings that leveraged QM for quality assurance at a Historically Black College/University (HBCU). The full implementation initiative took place alongside expanded efforts to implement the Blackboard Learning Management System. The case study did report improved learner outcomes, including pass rates and retention, but QM application took place as a part of a broader initiative to implement the use of an LMS, implement more robust professional development, and establish more defined policies to improve online programs (Harkness, 2015).

Hollowell et al. (2017) evaluated if students' grades would improve over multiple terms in a biology course offered at an HBCU in the southeast and taught by an instructor who completed the "Applying the Quality Matters Rubric" course (Hollowell et al., 2017). Hollowell et al. also asked

students to rate their experience. Students confirmed strong organization and multiple opportunities for assessments in courses delivered a term after faculty completed QM-focused professional development (Hollowell et al., 2017).

Lynch & Gaston (2020) conducted a retrospective data review to compare outcomes in QM redesigned courses to traditionally designed courses for a four-year, southeastern university nursing program. The study did not identify any statistical significance in student outcomes in QM redesigned courses compared to courses that had not been revised according to QM for a four-year university nursing program; however, there were some positive perceptions and overall gains (Lynch & Gaston, 2020).

The Lee et al. (2020) study found some inconsistencies in the rubric's impact on instructional outcomes. However, the study did confirm "learner engagement" embedded in General Standard 5 could increase instructional impact and promote learner success. Lee et al. revealed that QM rubric scores related to General Standard 5, which focused on Learner Activities and Interactions, had a positive and significant effect on online interactions between students and the instructor. These factors contributed to a stronger course community (Lee, 2020).

Sadaf et al. (2019) also confirmed the importance of learner engagement in virtual learning environments. Sadaf et al. (2019) deployed a cross-sectional survey and asked students in an instructional technology program to rate the impact each specific standard in the Higher Education rubric had on learning and engagement. Participants were asked if general and specific QM standards impacted their learning "a lot," "some," "a little," or "none." The study found that students in an instructional technology program found General Standard 5, Course Activities and Learner Engagement, to be the most significant standard influencing learning and engagement. Furthermore, the inquiry implied faculty and instructional designers can follow QM guidelines to incorporate activities, problem-based activities, case-based learning, and peer-to-peer interactions to encourage active learning (Sadaf et al., 2019).

Conklin and Barreto (2023) conducted a follow up study to the Sadaf et al. (2019) study. In their mixed methods study, they affirmed the importance of engagement and concluded clarity in assessment and measurement, learning objectives that served as the foundation for the learning experience, and

accessibility and usability were identified as the most impactful QM standards to student learning. The Conklin and Barreto (2023), Sadaf et al. (2019), and the Lee et al. (2020) studies suggest the importance of learner engagement in virtual learning environments. While they were both set in higher education institutions, learner engagement is also a factor in student success in K-12 settings.

Legon (2015) suggested it was not necessarily the application and fulfillment of stand-alone Specific Review Standards or even General Standards that resulted in positive learner outcomes. Legon (2015) suggested a methodology for measuring the impact of the standards based on clusters that can impact learner attitudes and performance. The combination of specific standards in clusters, such as alignment, clarity of purpose, ease of use, engagement, accessibility, knowledge acquisition, compliance, and learner support, can guide strategic course revisions to not only meet rubric requirements but to result in overall learner gains (Legon, 2015). The recommended methodology suggested various standards working cohesively can provide educators with guidance on designing and implementing online courses and might imply a broad understanding of the rubric can improve teaching practice and learner engagement.

Barczyk et al. (2017) researched whether age and employment level influenced student's perceptions of a quality course (Barczyk, 2017). The study found younger students (18-24), and mid-age students (25-44) placed a higher value on strong assessment and measurement (General Standard 3) in determining a quality course while older students (45+) found course technology to be more important (General Standard 6). Findings implied younger students valued clear assessment measures and the "grading" and evaluation aspect of a course, while older learners who may not be digitally native find a more positive experience with easy-to-navigate and apply technologies (Barczyk, 2017). Students who were employed part-time placed a lower value on General Standards 1, 2, 4, and 7 than their counterparts who worked full-time or were not employed. Barcyzk et al. suggest they may be because students not employed are focused solely on their studies and have higher expectations for a quality online experience and students who are fully employed are balancing the demands of providing for themselves and their families and have higher expectations because of the financial investment they are putting forth and the

time requirements of working full-time and taking course work (Barczyz et al., 2017). Findings on perceptions and the relationship with learner age may have implications for K-12 learners.

Additional research has focused on the feasibility of implementation. Gregory et al. (2020) evaluated the effectiveness of a QM implementation workshop for faculty. The mixed-methods study focused on faculty perceptions of the rubric. While faculty members at a southeastern community college found the rubric useful, many expressed challenges with implementation. Learning to apply it was perceived as time-consuming and rigorous. While meeting standards, specifically alignment and accessibility standards, were viewed as influential, they were also viewed as challenging to fulfill (2020).

Shattuck (2014, 2015) has summarized key studies focused on QM implementation and identifies several emerging themes, including learner and instructor perceptions of quality and satisfaction, the role of the learner's voice in describing the significance of QM standards, and learner motivation. Additionally, collective research has defined the close relationship between course design and instructional implementation and challenges for fully measuring learning (Shattuck, 2015). Faculty professional development as a component of effective implementation and alignment to frameworks are also themes appearing in literature focused on QM implementation (Shattuck, 2015). Most of the summaries are focused on QM implementation in higher education settings (Shattuck, 2015).

QM Research in K-12 Learning Environments

QM studies set in K-12 learning environments are limited. However, some general or Higher Education-specific findings may have implications in K-12. Because the quick shift to fully remote learning with the pandemic presented educators with challenges, Murillo and Jones (2020) suggested a pragmatic approach to applying QM rubric standards for both K-12 and Higher Education. Two, independent researchers reviewed the QM rubric and rated the specific standards from zero to two based on ease of implementation. Zero indicates easily implementable; one indicates structurally or partially implementable; two indicates difficult to implement (Murillo & Jones, 2020). Murillo and Jones' (2020) findings revealed that with a template, about 38% of the standards were easy for instructors to follow, 48% were achievable with intervention, and 14% were more difficult and often course-content specific.

Findings suggested that providing course templates based on QM standards can help teachers and faculty quickly set up and facilitate online courses. The findings implied supporting faculty and teachers, even those who have not formally been trained in the rubric, can provide design and instructional benefits (Murillo & Jones, 2020).

Dilberti (2018) proposed a conceptual framework for K-12 that blended strong course design from QM rubric standards with instructional concepts rooted in Garrison et al.'s (1999) Community of Inquiry (CoI) framework. Dilberti (2018) used a mixed-methods approach and deployed an electronic survey questionnaire asking teachers with experience in online and face-to-face instruction recommendations for improving the quality of state virtual school courses. The questionnaire collected teacher demographic information, asked teachers whether construct statements based on a conceptual model based in QM and CoI were likely to occur in online or face to face to classrooms, and incorporated open-ended questions asking participants for recommendations for improvement. One aspect of the survey asked teachers to identify what course design and instructional indicators, rooted in QM and CoI, respectively, would most impact student outcomes. The findings disclosed course assignments, teachers' instructional and communication responsibilities, and assessments were most likely to impact positive student outcomes in the virtual learning environment. Teachers participating in the survey also suggested providing more opportunities for social interaction in online courses (Diberti, 2018). This recommendation, like the Sadaf et al. (2019) and Lee et al. (2020) higher education studies, aligns with QM General Standard 5, which focuses on Learner Activities and Learning Interaction.

Kennedy et al. (2018) conducted a systematic review of K-12 research and correlated some research themes with iNACOL standards for courses and the fourth edition of Quality Matter to inform the fifth edition revision, but the findings did not focus on overall teacher experience and perspective. Most QM-impact studies have taken place in Higher Education environments, and research confirms K-12 learners often require even more structure and motivational support compared to Higher Education learners (Roblyer & Marshall, 2004, Weiner, 2003; Lee & Figueroa, 2012). However, Zhang & Lin do recommend applying theoretical frameworks based in Higher Education research to K-12 settings (2021).

Barbour's 2018 systematic review of distance, online, and blended learning recommended applying themes in Higher Education practice to K-12 settings. One practice includes using formative assessments, assessments that provide immediate feedback and allow learners to self-check their learning (Barbour, 2018). Another practice involves using learning management system analytics to drive instructional practice and design updates (Barbour, 2018). An additional recommendation is applying theories such as Garrison et al.'s (1999) Community of Inquiry (CoI) framework (Barbour, 2018) which describes the importance of teacher presence and social presence in establishing an effective learning environment conducive to learner cognitive presence (Garrison et al, 1999, as cited in Barbour, 2018).

There are some implications that QM implementation may have a broad organizational impact in K-12 learning environments. Implementation of the QM rubric throughout a virtual program may provide a common language and understanding that can allow teachers to better conceptualize the comprehensive virtual learning experience (Adair & Shattuck, 2015; Baldwin, 2019). Additionally, Quiroz et al. (2016) specifically mention QM research in Higher Education can provide some takeaways for K-12 practice. Quiroz et al. (2016) studied a cohort of educators in K-12 and Higher Education who completed a six-week Virtual Instructor Certificate Program (VICP) that integrated QM Essential Standards. As a part of the program, participants were assigned a module to design based on program experience. Participants were also distinguished based on whether they taught in a program with an established online infrastructure or not. A VICP facilitator evaluated the modules using the Essential Standards. 85% of the total participants met 15 of the 20 essential standards that were evaluated. In general, educators coming from programs with established infrastructures created online modules that fared better on their VICP evaluation. The study implied QM may provide possible professional development outcomes and necessary competencies for developing online courses and recommended further research in K-12 (Quiroz et al., 2015).

Although some research in Higher Education and K-12 have focused on faculty and educator perceptions of the rubric, most studies focus on faculty applying rubric understanding as they simultaneously instruct from a course they teach and design, perhaps with the guidance of an institution

(Conklin et al., 2020; Cowan et al., 2017; Hollowell et al., 2017; Kearns & Mancilla, 2017). To date, studies have not examined the specific perspective and experience of teachers serving as Course Representatives to support organization-managed master course reviews and how the Course Representative experience and the QM rubric could impact professional experience and instructional practice. Because K-12 programs continue to invest in QM certification and leverage teachers to serve as Course Representatives (Quality Matters™, 2024; VLLA, 2022), inquiry focused on the teacher perspective of the Course Representative experience and its transference into professional practice can provide implications for educators seeking to build online capacity. Research can also provide further examination of the overall impact of the QM rubric and its significance in supporting instruction and overall quality in K-12 learning environments.

Chapter Two Summary

As the demand for K-12 virtual learning options has accelerated in the first quarter of the century, so has the need to establish best practices in online instruction and online course design. Research, collaboration, and discussion have guided the establishment of instructional standards for K-12 educators and frameworks for online course design. The QM rubric, one of the most recognized quality assurance frameworks in online course design, influences design practice in Higher Education and K-12. The rubric's impact has been studied in Higher Education settings and some research does provide some implications for K-12 practice. However, QM's influence among K-12 educators and how the rubric can impact professional experience and instructional practice remains uncertain.

Chapter Three Preview

Chapter Three examines the methodology selected for this qualitative study. The rationale of an exploratory case study design will be explained. The case study site and participant qualifications and recruitment will be described. Methods of data collection and analysis and alignment with the research questions will be discussed. Ethics, researcher reflexivity, and positionality are also considered.

CHAPTER THREE

As a means of demonstrating virtual program quality, state-led, supplemental, K -12 virtual schools may apply instructional standards and frameworks for course design quality, including the QM course design rubric. State-led programs may submit their courses for official QM review and rely on teachers to serve as QM Course Representatives, individuals who prepare a course for official review and serve as a point of contact for the QM peer review team to scale organizational initiatives. Serving as a QM Course Representative requires time, professional commitment, professional focus, and typically specific professional development that may divert from critical instructional focus in the virtual learning environment. Determining if the QM Course Representative process provides professional benefits for teachers whose primary professional responsibilities center around instruction in supplemental virtual programs, may provide guidance for educators considering investment in QM initiatives.

Purpose and Research Questions

This qualitative case study explored the perspectives of K-12 virtual teachers at a state-led supplemental school who share the common experiences of teaching online courses for a fully virtual program and serving as Course Representatives for organization-initiated QM course reviews (Creswell & Creswell, 2013). The study's findings aim to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. Additionally, the study may provide implications for professional development opportunities for virtual teachers and drive further research on the implementation of quality assurance frameworks to enhance educator practice. Three research questions guided this study and focused on the experiences and perspectives of teachers serving as Course Representatives before, during, and after a QM review including:

RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ 2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

Methodology

To address the research questions, an exploratory case study involving Middle School and High School teachers who served as QM Course Representatives and have been teaching in a contract capacity at a state-led, K-12 supplemental virtual school was conducted. Exploratory case studies seek "what" and "what about" a situation or phenomenon and typically begin with a clear rationale to drive the research (Yin, 2014). Additionally, exploratory case studies are usually applied to emerging research in specific contexts, and findings are intended to launch broader studies (Yin, 2014). A case study approach allowed for the application and impact of the QM Course Representative experience to be described in the real-world context of fully online K-12 learning environments and investigated the perceived impact of the Course Representative process and the QM rubric on virtual teachers' professional experience (Yin, 2014).

Research Design Rationale

Qualitative research traditionally applies a relativist ontology and espouses that knowledge and truth are based on local and specific constructed realities (Lincoln et al., 2011; Rashid et al., 2019; Stake, p. 12, 1995). Social constructivism incorporates aspects of a relativist ontology and acknowledges unique and relative views of truth and knowledge; however, social constructivism emphasizes the co-constructed realities among individuals who share common life and work experiences (Creswell & Creswell, 2013). The purpose of this inquiry was to explore the experiences and perspectives of a precise group of teachers at a K-12, state-lead, supplemental virtual school serving as QM Course Representatives (Creswell & Creswell, 2013; Yin, 2014).

Case study design allowed for research of a "bounded system" (Merriam, p. 28, 2009) and investigated a precise phenomenon in a real-world context (Yin, 2014). The phenomenon and boundaries of the case involved K-12 virtual teachers from a specific state-led virtual school and their experiences and perceptions of serving as QM Course Representatives for organization-managed master courses (Merriam, 2009). Because case studies focus on a precise case and bounded system, the description, perspectives, and interpretations of a case study are site-specific; however, empirical research on a case

can reveal insights about specific theoretical concepts. Case study findings may provide some analytical generalizations (Brinkman & Kvale, 2014; Yin, 2014) regarding K-12 virtual teachers' experiences with the Course Representative process and determine if the experience supports professional experience including instructional practice. Because of the exploratory nature of the case study, description and interpretation may be applied to future studies regarding the perceived impact of K-12 teachers supporting organization-based quality assurance initiatives. (Yin, 2014).

Positionality and Reflexivity

Qualitative inquiry commands researchers to analyze personal involvement with the research topic and research methods (Cassell et al., 2020; Creswell & Creswell, 2013). I begin this inquiry by assessing my positionality to the research topic and participants. I am certified in applying the QM rubric, and I am certified to serve as a QM Peer Reviewer and a QM Master Reviewer. I have ongoing experience with the QM rubric and consistently apply it in course design. Most of the research I have reviewed and conferences I have attended for my professional work have overwhelmingly praised the QM rubric as a means of course quality assurance. Part of my full-time work involves supporting educators throughout the course design and Quality Matters™ course review process at a K-12 organization. I have supported the design of organization templates, rubrics, and internal training for teachers and part-time designers focused on how to apply QM rubric principles for my organization. While I agree standards of quality are important when designing fully online courses and agree with the broad focal points of the QM rubric including learner support, digital accessibility, and alignment in virtual environments (Quality Matters™, 2022), I am skeptical if an external, prescriptive rubric and official reviews are the only means to ensure quality and provide a conceptualization of effective online practice.

Although I do not directly oversee teacher instructional duties, I have an auxiliary understanding of a teacher's daily workflow based on organizational documentation of teacher expectations. I have served as a virtual teacher myself, but I have not served in the teacher role for over nine years, and since then, there have been changes in leadership and instructional expectations. While I was a K-12 virtual teacher, I did not have QM rubric experience, and I often consider how QM experience might have

influenced my professional experience as a teacher. My experience and professional role required constant reflexivity during the research process. For instance, during the interviews, several participants would allude to past conversations I had with them or contextual information. I was intentional with how I integrated this information into the research findings. Additionally, reflexivity involves consideration of how I acquire and analyze the data (Cassell et al., 2020). To encourage authentic participant response, I was conscientious of how I approached research questions and topics focused on the Course Representative experience and QM rubric. I also wrote memos and summarized my interpretive findings and relied on member checks as a part of trustworthiness and personal reflexivity (Stake, 1995).

Ethical Considerations

Ethical qualitative inquiry requires researchers to account for how they protect, select, and interact with participants (Cassell et al., 2020, Creswell & Creswell, 2013). The research focused primarily on professional perspectives regarding support of organizational course quality assurance initiatives, and minimal risk or harm was expected. However, the researcher was intentional, transparent, and reflexive throughout the process to minimize risk and to ensure participant perspectives were conveyed as accurately as possible and privacy was maintained. Prior to administering the study, the lead researcher corresponded with the Executive Director at the case site and requested access to data and participants. There were multiple sign-off points including electronic consent and verbal consent during the interview, so the program director and participants were aware of how personal privacy was protected. Additionally, a gift card incentive was offered for participation, and even after the interview was completed, participants had the option to back out of the study. All participants remained a part of the study. The terms were incorporated in the Institutional Review Board (IRB) protocol.

Case Setting

The case site was a middle and secondary, state-led, virtual school in the United States offering supplemental middle and high school instruction and coursework for students throughout the respective state. The Virtual Learning Leadership Alliance (VLLA), a national association of supplemental virtual schools (2018), defines supplemental online courses as “courses used to augment a learner’s regular

course schedule" (VLLA, Key Virtual Learning Terms, 2018). In a supplemental virtual program, teachers and students are geographically separated, and the students receive diplomas from another institution. Students taking supplemental courses at the case site are registered through a public, charter, private, or home school located in the state. The case site currently serves over 50,000 enrollments per year and employs a full-time staff to support instruction and curriculum and oversee operations. An enrollment is calculated per course, and it is not uncommon for students to enroll in several courses per year and represent multiple enrollments.

The case site program is led by an Executive Director and full-time staff are organized under two large divisions: the Operations Division, which includes the Office Staff, Technology Staff, and Outreach and Support Staff. Full-time staff members serve in leadership and support roles for the virtual school. The school employs over 600 contract-based teachers to meet its enrollment demands. All teachers must be highly qualified and state-certified in the respective grade level and subject area. All teachers are hired on a part-time, per-student, contract basis and report to members of the case site's Instructional Staff. Some of the site's virtual teachers may teach full-time at a brick-and-mortar school and extend their workday and income through contract work with the case site. Others may teach exclusively for the virtual program but still under a part-time per-student contract.

Additionally, site teachers may serve in other contract capacities including as lead instructors who provide coaching and support to teachers within their department, course writing team project leads who provide support to content writing teams, and lead teachers of a course who facilitate discussion among teachers teaching from a common master course and inform best practices and potential course updates. Teachers can also contract to work with the Curriculum Staff to write and review course content. These additional opportunities are all contract-based, but teachers typically maintain these roles as they continue to teach in a contract capacity for the organization.

In addition to hiring teachers on a part-time, contract basis, supplemental programs, including the case site, often provide a fully-designed, organization-managed, master course for teachers (Linton & Journell, 2015). A master course, used among all teachers teaching a specific course, is expected to align

with the curriculum issued by the state Department of Public Instruction or the College Board's Course Exam Description (CED) if the course is an Advanced Placement (AP) course. At the case site, most of the master course offerings were developed by a collaborative content authoring and instructional design team. The content authors are typically teachers from the virtual school who are contracted to serve as subject matter experts. The instructional design team are hourly contractors who have a background in integrating tools and technology and designing in an LMS. The contract designers are usually not teachers and have committed contract roles focusing on technology and course design. All course authoring and design contractors conduct duties under the oversight of the program's full-time Curriculum staff. The Curriculum Staff also oversees the Quality Matters™ official peer review application process. Prior to expanding organization-managed master peer reviews, several full-time staff members throughout both the Operations and Academics Division of the case site completed the official Applying the Quality Matters™ rubric course.

Additionally, the online program also applied and passed a template review, a QM review process that allows subscribing members who intend to submit five or more courses for review and follow a course template for course design across subject areas to receive template approval (Quality Matters, 2024). A template review certifies 15 of the 43 specific review standards under the assumption that course introduction elements, course technology elements, learner support, and aspects of accessibility will be consistent across a program (Quality Matters, 2024). Courses submitted after a template review, including the courses the case site participants represented, are only evaluated on specific review standards applicable to a precise course (Quality Matters, 2024).

Some teachers at the case site may simultaneously teach and participate in a course content authoring team, but content authoring is not a requirement for teachers at the case site, and it involves a separate hiring process. Therefore, many teachers are provided an organization-based course master and teach online courses they did not design or author (Baldwin, 2019; Davis, 2018; Linton & Journell, 2015). While they can work collaboratively with other teachers to inform of updates, most strategic updates to organization-managed master courses are done under the direction of the full-time Curriculum Staff. At

the case site, teachers would have been offered the opportunity by the Curriculum Staff and Instruction Staff to serve as Course Representatives, but willingness to serve as Course Representatives was not a contingency to continue teaching online courses. The Curriculum Staff provided online training and template documents to prepare teachers to serve as Course Representative and to support teachers throughout the process.

Participants

Case study participants included teachers who currently teach for the supplemental virtual school and have served as QM Course Representatives through an opportunity presented to guide organizational initiatives. Since case study participants must be aligned with the case and must meet certain criteria, including current teaching employment at the case site and between six months to two years since they participated in the QM Course Representative process, purposeful sampling was applied to identify eligible site participants (Merriam, 1998; Stake, 1995; Yin, 2014). The six-month to two-year span since completion of the Course Representative process allowed enough time for reflection on perceived professional benefits but also allowed for the recent recall of the experience (Merriam, 1998). There was some variability in participant experience with course design and other roles and responsibilities throughout the organization. Some participants served in other contract leadership roles and some participants were involved in contract course design for the organization, but neither of these factors were requirements for serving as Course Representatives. However, these extended leadership and authoring experiences were incorporated into the interview protocol and participant profiles.

Participant Recruitment

To identify qualified candidates, the researcher first requested permission from the site Executive Director to access the organization-based QM Course Representative Course, the online course required for QM Course Representative participation at the site, the online courses set up for QM review which includes teacher created-materials, and other Learning Management System (LMS) and Cloud maintained resources supporting the organization’s QM process. The Executive Director’s contact information was

presented on the external-facing webpage of the program site, and the researcher contacted the Director via the researcher's university email (Appendix A).

Once the Executive Director granted permission for the study to occur at the site and the IRB was approved, the researcher reviewed the course directory of the Course Representative training course and the list of email contacts of all past participants. An email was sent from the researcher's university email to course participants who last accessed the course within six months to two years of the study, offering a $30 Amazon gift card as an incentive for participating in a 60-minute semi-structured interview (Appendix B). The total amount for gift cards was a part of the researcher's personal budget allotted for study and coursework. The researcher worked with the virtual program's Technology team on several occasions to ensure the email solicitations could pass through the organizational Firewall. However, after several attempts, the Technology and Leadership team concluded the out of domain survey might have blocked appropriate delivery. Therefore, the researcher requested to communicate with teachers using organizational Gmail, but all survey data was linked back to the university email.

After the emails were successfully delivered from the institutional email, interested candidates completed a Google Form interest survey included in the email solicitation (Appendix B). The interest survey included online consent and provided skip logic if the participants indicated online consent. The interest survey also included questions about additional professional experiences teachers have had online, including leadership experience or course design experience, as these experiences may potentially influence the perspectives of teachers. The survey was open for two weeks to limit participation to around six to eight participants. A limited sample provided in-depth perspectives of site participants. Since participants would have completed the Course Representative process during an aligned time frame and followed similar procedures and the same training, six to eight participants would provide various perspectives of teachers from varied subject areas and experience levels but provide manageable data to triangulate with program documents (Yin, 2014). Seven teachers responded, met eligibility requirements, and signed off on informed consent.

Data Collection

Case Study Database

Case studies rely on multiple data sources, and case study databases assist with maintaining various data sets collected throughout the inquiry process (Yin, 2014). Prior to beginning data collection, the researcher set up a case study database in the university's Google Drive to support the management and analysis of converging evidence (Yin, 2014). All personal identifiers were replaced with an alias and the case site name and other program identifiers were redacted to ensure participant privacy. Appendix C presents the research questions and how data accumulated in the case study database, including documents and interview questions, addressed the research questions.

Pilot Study Interviews

A pilot study was conducted the year prior to this inquiry to support the refinement of the full case study design (Yin, 2014). The pilot study interview protocol allowed the researcher to test questions and processes and determine the logistics for the full study. During the pilot study, the six months to two-year period since participation was determined as a reasonable range to recall the practice and implement knowledge into practice. The pilot study also guided the choice to provide the rubric via email a few days prior to the interview (Yin, 2014). Following the pilot study, the interview protocol was modified to focus on teachers' descriptions of the QM Course Representative experience including what led to participation, the experience and perspective of serving, and the perceived significance of the experience on professional development. Additionally, pilot study findings identified specific documents and support resources used during the QM review process; documents discussed during the pilot study interviews were requested for analysis during the full study (Yin, 2014).

Case Documents

Prior to the interview process, the researcher requested documents from the Executive Director and Curriculum and Instruction Leadership team at the program site that described and explained the QM course review preparation provided for teachers. During the pilot study interviews, participants described the QM K-12 rubric, the LMS-based training, the templates to guide the completion of the QM course

review worksheet, and the alignment chart for the course standards. The researcher requested, described, annotated, and took memos of documents and materials provided for training and support in a tabular document. Data accumulated for document analysis was used to triangulate and provide a rich description of the participant experience. Additionally, any content participants created for the official QM review, including a custom syllabus, welcome announcement, and custom teacher welcome page was requested and analyzed. Memos analyzing requested documents were recorded prior to interviews. Teacher-created content was also integrated into the interview protocol to support elicitation response and provide triangulation of teachers' perceptions and experiences of the QM Course Representative process. The researcher reviewed and took memo notes of each the documents prior to interviews to support participant-specific questions that were anticipated to emerge during each interview. Consent to review and discuss teacher-created content during the interview was incorporated into the IRB and added as a field in the interest survey. A consent statement was also app shared and stated aloud before beginning each participant's interview in Zoom.

All acquired documents were labeled and maintained in the case study database and redacted to maintain program and personnel confidentiality. The documents represented a purposeful sample of resources provided to prepare teachers to serve as Course Representatives and content created by the teachers to support the QM review process (Morgan, 2022).

Participant Interviews

Following document analysis, the researcher conducted individual, semi-structured interviews with case study participants. Interview protocol questions (Appendix D) were modified based on initial document analysis memos. All full study interviews took place and were recorded in the university's *Zoom* platform. Participants were informed of the scheduled date and sent a copy of the QM rubric for review via email prior to the interview. Pilot study findings suggested participants should be emailed a copy of the external-facing QM K-12 rubric from the QM website and any materials supporting the process about a week prior to the scheduled interview as a week could provide ample time to reflect on the rubric and process since most teachers would have served as Course Representatives between six and

twenty-four months prior to the study. Additionally, a week prior to the interview teachers were granted access to a copy of the organization-managed course they set up as Course Representatives for the peer review. Materials teachers created for the QM review were incorporated into the interview protocol for participants as a part of elicit response discussion (Barton, 2015; Douglas et al., 2015).

Each interview recording archive provided an auto-captioned transcript, and the researcher manually edited the transcripts during audio playback. Pilot study interviews suggested the connective benefits of both the researcher and the participant having the camera on during the interview. Additionally, the researcher screen-shared materials supporting the QM process during the interview to evoke recall. The researcher assured participants that videos were to be deleted, and the audio would be maintained for transcription and research purposes. Full study interview transcripts were added to the case study database and labeled according to participant aliases. Transcripts were redacted, as needed, to maintain program and personnel confidentiality (Yin, 2014). The audio files were maintained in the case study database in Google Drive, labeled according to the participant alias, and will be permanently deleted upon publication of the study.

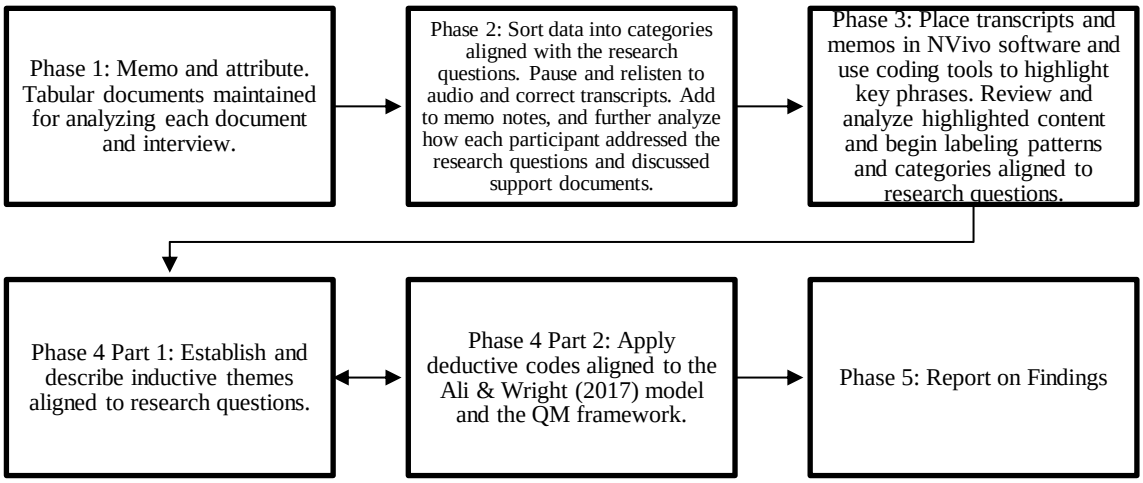
Data Analysis

To maintain focus on the case, case study data needs to converge rather than be interpreted separately (Baxter & Jack 2008). Converging data, including interview transcripts and case documents described the context of the case and steadily built a converging explanation of teachers' experiences and perspectives of the QM Course Representative role (Stake, 1995; Yin, 2014). Data was analyzed in alignment with the research questions and provided a description, analysis, and interpretation of the case (Merriam, 1998; Yin, 2014).

The inquiry combined both inductive codes aligned to teacher experiences and perspectives and deductive codes aligned to the QM K-12 rubric and the Ali & Wright Online Faculty Professional Development Model (Ali & Wright, 2007; Blair, 2015). When applying deductive and inductive codes, Bingham (2023) suggests a five-phase process that involves first organizing the data through memoing and attributing each data component; second, sorting the data into topical categories aligned to the

research questions; third, following an open coding process; fourth, identifying patterns, themes, and findings; and finally, applying theory and explaining findings (2023). During the fourth phase, deductive findings can be built upon emerging themes identified during the open coding process. Deductive codes would often cycle back to inductive findings, further describing participants' experiences and further reinforcing their perspectives, particularly the professional significance of QM and the rubric. Bingham's process is recommended when engaging in multiple phases of data analysis that incorporate deductive and inductive findings (2023). Figure 2 below presents the five-phase approach applied throughout this study.

Figure 2: *Bingham's (2022) Five-Phase Process of Data Analysis as applied in this study.*



Analysis of Case Documents

Case documents triangulated teacher perspectives, supported teacher recall of the process, provided a rich description of the case, and guided the researcher in establishing categories and themes (Creswell & Creswell, 2013; Yin, 2014). As the researcher began document analysis, the researcher followed the first step of Bingham's (2023) process. This first phase of document analysis involved memoing and attributing data components and constructing memo notes that organized, summarized, and analyzed what each document suggested about the overall QM Course Representative process for teachers (Bingham, 2023; Saldaña, 2021). Memo notes used while analyzing documents were maintained on a

consolidated tabular. The tabular document identified the document title, a description of the document, how the document was used in the site's QM Course Representative process, and a summary of what the document suggested about the teachers' experiences. A sample document analysis memo is presented in Table 3 below. Memo and summary notes were specific to each participant as each participant provided materials unique for each course and course review. Documents and memos supported the preparation of full-study interviews (Merriam, 1998).

Table 4: *Document Analysis Table Including Sample First Entry*

Document Title	Quality Matters Course Representative Training Course Introduction Section
Description of the Document	The first section of the organization-authored Course Representative Training, an online training course designed to guide teachers with the Course Representative process, located in the case site's secure LMS, is a course introduction. It explains that completing the course is a requirement for all case site teachers preparing to serve as Course Representatives. The introduction text acknowledges that teachers are "seasoned teachers" and content experts in the courses in which they were assigned. The introduction also explains the purpose of the course is to guide teachers on the contractual obligations of a Course Representative. The introduction encourages enrolled teachers to refer to it throughout the process.
How the document is used for the site's QM review process	Introduces the teachers to the course and explains the purpose.
What does this document suggest about the overall QM process for teachers (may be specific to each course and participant?	Teachers are "seasoned teachers" and have content expert knowledge. Teachers are under contract as Course Representatives. Teachers may need to reference the course throughout the process.

Analysis of Participant Interviews

The researcher cycled back to Bingham's (2023) phase 1 and organized interview documentation and memos immediately following each interview. Memos were added to a tabular document that provided a brief description of each participant, participant references to documents included in the document analysis phase (where applicable), and a reflective summary of how the participant addressed each research question. Table 4 below provides a sample from one of the participants.

Table 5: *Sample Interview Summary and Description*

Alias	Patty
Subject Area	World Language
Grade level of students taught (Middle or High School)	Middle and High School
Other professional duties the participant may maintain	Course Leader. Department chair and language teacher at her face-to-face school. For middle school administrator.
Participant references to documents to possibly include in case study	Announcements, K-12 rubric, QM course rep checklist, syllabus, worksheet draft.
Summary of how the participant addressed RQ1	The Curriculum Staff asked her to participate. She assumes she was asked because she was the lead teacher for the course. The participant knew "zero" about QM prior to this process. Participant liked the process overall. She did say it was very overwhelming and confusing at first. She learned a lot about the course through the process.
Summary of how the participant addressed RQ2	Prior to QM course rep participant, the participant had not had many experiences focused on standards alignment and matching up objectives. Participant has done some online content writing before, but the QM course rep process introduced her to some novel experiences that she was able to share with other teachers. She appreciated the support and structure the virtual program provided. She perceives the Course Representative experience as a good way to help virtual teachers organize and operationalize a lot of the tasks they do. She compared online organizational structure to "using file cabinets" in the classroom.
Summary of how the participant addressed RQ3	The participant liked the structure of the process and the opportunity to drill down into the course. She had never participated in standards alignment processes before, and she felt this was a good preparation for upcoming standards changes and course updates. Additionally, the participant appreciated the overall focus of the rubric and felt applying it made a good course even stronger. She specifically liked the suggestions for improvement from the team and shared the suggestions with her team of teachers on her own initiative. This discussion allowed the team to reflect on what was working or what could be improved in the course.

After initial reflection of the interviews, the researcher followed Bingham's (2023) second step and paused and replayed the interview audio while manually correcting auto-generated transcripts from *Zoom*. Additional memos were added to the tabular documents as the researcher continued to engage with

the data. After pausing, playing, and correcting, the researcher moved to phase three and placed the transcripts into NVivo software and used the software coding tools to highlight direct passages from transcripts and establish patterns and codes. Document analysis memos were also placed in NVivo and incorporated into pattern, code, and theme building. Codes emphasized the participants' precise descriptions of their experiences and their overall perspectives before, during, and after a QM review (Saldaña, 2021). While coding the interviews, the researcher established patterns across multiple data sources. (Bingham, 2022; Merriam, 1998).

Final Coding

Bingham's (2022) fourth phase involves generating themes based on an inductive analysis of teacher perspectives and deductive analysis based on Ali & Wright's (2017) model and the QM rubric. After all data was collected and analyzed, the researcher conducted a final analysis and final reduction of patterns and themes in NVivo to ensure data from documents and full interviews provided converging evidence and addressed the research questions (Merriam, 1998; Yin, 2014). During this fourth phase, inductive themes describing participant experiences and perspectives, particularly regarding the professional development aspects of the experience, were applied to the deductive codes of the Ali & Wright (2017) model. Upon final coding, six upper-level, inductive themes were identified to address RQ1; three upper-level themes were identified to address RQ2, and two upper-level themes were identified to address RQ3. Deductive coding applied from the Ali & Wright (2017) model supported inductive findings for RQ2, particularly the description of the Course Representative process, and inductive findings for RQ3, particularly the individual benefits of the rubric and Course Representative experience. The consecutive steps of data analysis supported the fifth phase of Bingham's five-phase process, the report of findings. Themes provide a rich description of the case and an analysis of how teachers at the site collectively described and perceived the QM Course Representative experience before, during, and after a QM review.

Trustworthiness and Quality

The researcher provided an opportunity for member checks (Stake, 1995). Each participant was sent a corrected transcript and a summary of key findings to review via email. Five of the seven participants responded positively to the email and said they appreciated the opportunity to speak about their experience, but no one corrected any data and findings offered. As a further measure of trustworthiness, codes, categories, themes, tabular documents, and case study database information were verified with the methodologist and dissertation chair.

Limitations

While they may be able to provide analytical generalizations (Brinkman & Kvale, 2014; Yin, 2014), case studies, by design, cannot represent a larger population (Yin, 2014). Additionally, the case study includes constraints for site-specific generalizations. The virtual school employs hundreds of contract teachers and provides an extensive program catalog of middle and high school courses, and the inquiry included seven teachers who served as Course Representatives for a total of eleven distinct courses. Because of the small sample size, not all subject areas and grade levels at the program site were represented. Furthermore, findings revealed all participants had career educator experience and worked for the virtual program for five or more years, and most were in education for ten or more years. The perspective of new teachers was not incorporated as a result of the limited sample. Additionally, because the study was time-bound and interviews and research were conducted over a specific period, it is possible teachers who may have been eligible participants experienced priority constraints. Furthermore, the virtual program has subscribed to Quality Matters™ and participated in the external course review process for several years. Since the study limited participation to teachers who served as Course Representatives from six months to two years prior to the interviews, it is possible individuals with earlier QM review experience might have a different perspective if practices and process may have evolved over time.

Chapter Three Summary

Chapter Three provided a rationale for an exploratory case study design for an inquiry on the experiences and perspectives of teachers serving as QM Course Representatives supporting organization-

based initiatives. Document analysis and transcripts based on semi-structured interviews with a purposeful sample of teachers who have served as Course Representatives and presently teach for the virtual organization provided converging evidence of the case. Collected data was analyzed using Bingham's (2023) five-phase process that applied memoing, organizing, highlighting, coding, finding inductive patterns and themes based on teacher experiences and perceptions, and applying deductive codes based on the QM K-12 rubric (2018) and the Ali & Wright (2017) Online Faculty Professional Development model. NVivo software was used to organize and manage coding and the identification of categories, patterns, and themes.

Chapter Four Preview

Chapter Four will discuss the overall study findings. Documents will be identified and described to support a rich description of the case. The multiple phases of document and interview transcript analysis are described. Patterns and themes that emerged to align with the research study describe participant experiences with the Course Representative process and the perceived professional impact of participating in QM peer reviews. Deductive codes will be applied according to the Ali & Wright (2017) Online Faculty Professional Development Model.

CHAPTER FOUR

This qualitative case study explored the perspectives of K-12 virtual teachers at a state-led supplemental school who share the common experiences of teaching online courses for a fully virtual program and serving as Course Representatives for organization-initiated QM course reviews (Creswell & Creswell, 2013). Study findings aim to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. Additionally, the study may provide implications for professional development opportunities for virtual teachers and drive further research on the implementation of quality assurance frameworks to enhance educator practice. Three research questions guided this study and focused on the experiences and perspectives of teachers serving as Course Representatives before, during, and after a QM review including:

RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ 2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

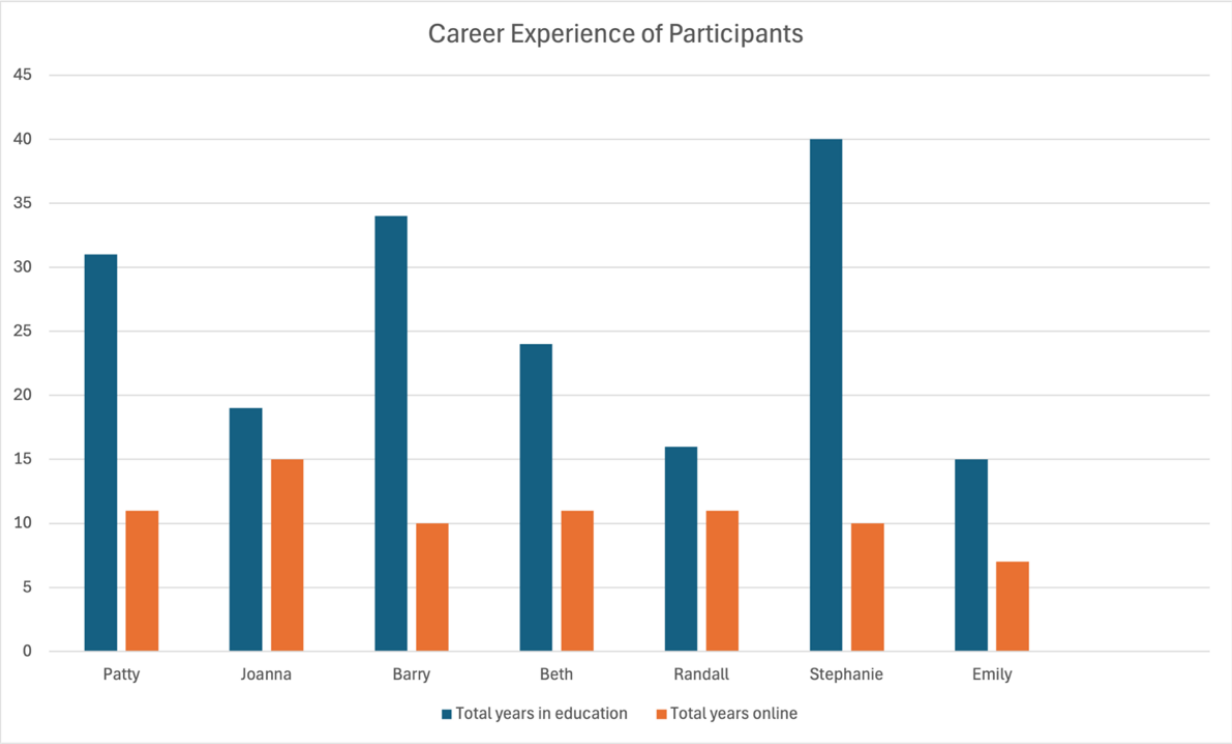
Data was first analyzed using inductive codes centered on the experiences and perspectives of teachers. After inductive codes were identified, deductive codes following Ali & Wright's (2017) Online Faculty Professional Development Model and several General Standards and Specific Review Standards from the Fifth Edition of the Quality Matters™ K-12 rubric (2018) were applied to extend on findings. Data and findings specified what led teachers to serve as QM Course Representatives, revealed the experiences of the seven participants, and provided a rich description of the Course Representative process for teachers. When describing personal experiences and perspectives, particularly the recall of the process and the perceived significance on professional development, all seven participants also alluded to the phases of Ali & Wright's (2017) Online Faculty Professional Development Model. Additionally, documents and interviews referenced all eight General Standards and eight of the 43 Specific Review Standards.

Participant Summary

A total of seven virtual teachers from the case site participated in the study. Each participant completed a brief interest survey to determine eligibility and provide electronic consent. Eligible participants were current virtual teachers at the case site and participated as Course Representatives for an organization-based course master official peer review within the last six to twenty-four months. The participants represented a range of high school subject areas including English, Math, Science, World Language, and Visual Arts. All participants had extensive teaching experience both online and in a face-to-face setting. While none of the participants taught a distinct middle school course for the organization, some did have experience working with middle school students who were enrolled in virtual courses for high school credit, or they had prior experience working with middle school students in the face-to-face setting.

Study participants were all experienced educators and boasted significant teaching experience virtually and in the face-to-face classroom. Each participant worked in education for at least 15 years, and three participants had 30+ years of experience. One participant, Stephanie, was a retired classroom educator and worked exclusively online since her official retirement as a state classroom educator. The other six participants held full-time responsibilities as classroom teachers, administrators, K-12 district or higher education support professionals, or Instructional Designers. Several served in leadership positions at brick-and-mortar schools. In addition to a long tenure in a face-to-face setting, all participants had at least five or more years of virtual experience with the organization. A few have taught with the virtual program since the initial years of the program's founding. Figure 3 below presents each participant's total years in education and each participant's years teaching online.

Figure 3: *Career Experience of Participants*



In addition to extensive experience in education, each participant held a contract-based leadership role at the virtual program as either a Course Leader, Instructional Leader, or Curriculum Leader. All participants also had prior course development experience and had either served as content writers, authoring a fully online course from start to finish with a team of writers, reviewers, and designers, or they completed a contract to update specific content in a current course. Moreover, each participant served as a Course Representative for a course they taught online with the organization. Additionally, to help support organizational reviews, two participants, Stephanie and Emily, represented multiple courses, including a few they did not teach. Furthermore, Stephanie and Emily also worked in contract roles to support other teachers at the virtual program who were participating as Course Representatives for organization-managed master course peer reviews. During a period when many organization-managed course masters were being submitted for official QM peer review, the full-time Curriculum Staff contracted teachers, including Stephanie and Emily, who had undergone the Course Representative process prior to the period of widescale submissions, to serve as peer support for other teachers who were

working as Course Representatives for the first time. Stephanie's and Emily's experiences leading others through the Course Representative process and the significance it had on their experiences and perspectives as Course Representatives and engaging with the QM rubric will be discussed in the study findings.

Table 5 below presents each participant's teaching subject area, the subject of the courses each participant represented, the grade level each participant teaches online, and additional contract roles each participant maintains at the organization.

Table 6: *Participant Profiles*

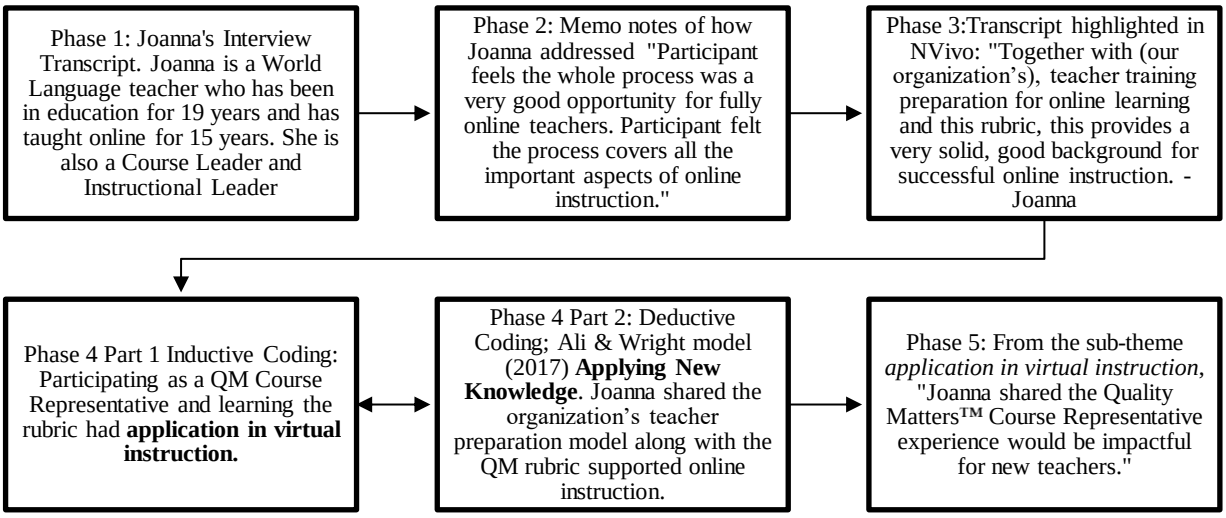
Participant Alias	**Teaching Subject Area**	**Subject of Course(s) Represented**	**Grade level area online**	**Additional contract roles**
Patty	World Language	World Language	High School with some Middle School co-enrollment	Course Leader, Content Writer
Joanna	World Language	World Language	High School	Instructional Leader, Course Leader, Content Writer
Barry	Science	Science	High School	Instructional Leader, Course Leader, Content Writer
Beth	English Language Arts	English Language Arts	High School with some Middle School co-enrollment	Instructional Leader, Course Leader, Content Writer
Randall	Science	Science	High School	Course Leader, Content Writer
Stephanie	Visual Arts	Visual Arts	High School with some Middle School co-enrollment	Instructional Leader, Course Leader, Content Writer QM Peer Support
Emily	Math	Math and CTE	High School with some Middle School co-enrollment	Instructional Leader, Content Writer QM Peer Support

All participants served as a Course Representative for a course they were qualified to teach. In Emily's case, because she held an established curriculum support role, she represented a few courses she did not teach as a part of her role responsibilities. All participants were experienced educators in both the middle and high school environments and held leadership roles the virtual organization. These factors provided some insights on what led them to participate as Course Representatives and how they described and perceived the experience.

Findings Addressing Research Questions

Three research questions guided the coding process (Saldaña, 2021). The questions followed a chronological progression of teachers' experiences before the Course Representative process (RQ1), during the Course Representative process (RQ2), and after the QM review had concluded (RQ 3). Analysis of how participants addressed the research questions and their precise descriptions of their experiences and perspectives allowed for patterns and themes to emerge. Documents triangulated participant perspectives and descriptions. Additionally, deductive codes corresponding with Ali and Wright's (2017) Online Faculty Professional Development, applied after inductive codes were defined, and enhanced the description of the participants' experiences, particularly how they described the requirements of the Course Representative experience and the perceived professional impact of the experience that could be applied after the QM review concluded. Figure 4 presents an example of how the coding process was carried out with memos and passages from a specific interview transcript. While the example presents one passage from one participant interview, it visualizes the five-phase data analysis process followed across data sources and themes. Appendix E also presents an abridged copy of the NVivo codebook organized by research questions and higher-level themes and sub-themes.

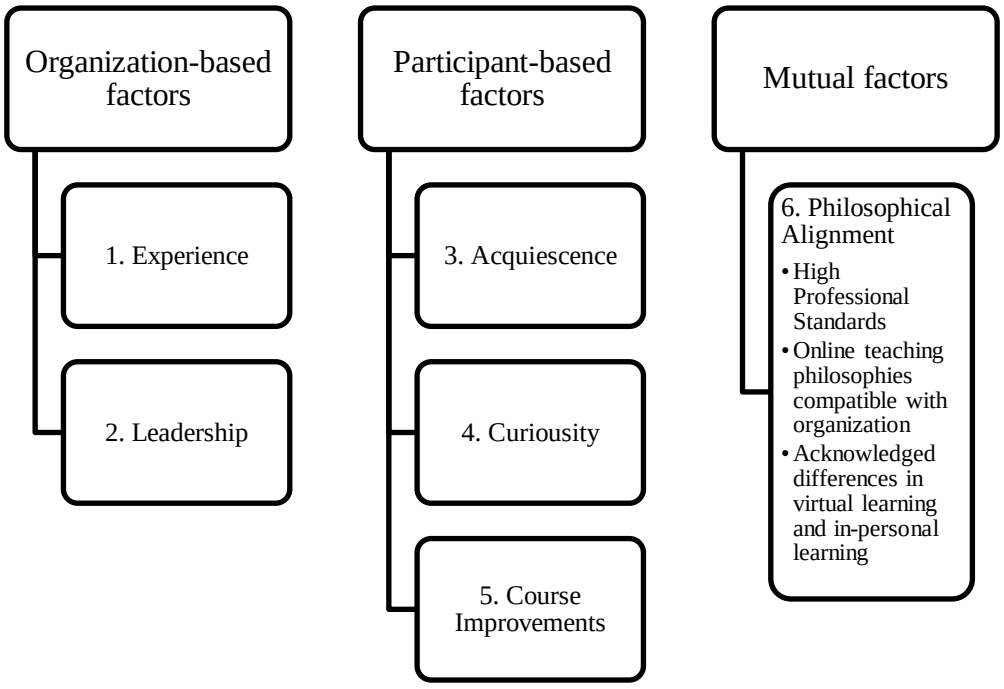
Figure 4: *Example of how Bingham's (2022) process was applied with Joanna's transcript*



RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ1 focused on what led teachers to serve as QM Course Representatives. Throughout the memo, coding, and pattern-building process across data sources, six, upper-level, inductive themes emerged addressing what led teachers to participate. The six themes can be distinguished as organization-based factors, participant-based factors, or mutual factors between the organization and participants and are presented in Figure 5 below.

Figure 5: *Organization-based, participant-based, and mutual-based factors addressing RQ1*



Organization-based factors

In their interviews, six of seven participants revealed they were "asked" to participate as Course Representatives. Emily was the exception, as she was not asked to participate as an extra opportunity; she was directed to participate as a part of an existing curriculum support role she held. Analysis of the organization's 13-component QM Course Representative Training Course confirmed the request by thanking teachers for "agreeing" to participate as Course Representatives. All seven participants explained they were experienced educators, had career service in a building setting, and had multiple years of online teaching experience. Additionally, all participants taught online anywhere from seven to fifteen years. The introduction to the QM Course Representative Training referred to the teachers as "seasoned teachers," a reference that further confirmed the experience of participants.

All seven participants described career experiences that perhaps alerted program staff of their potential to serve as Course Representatives. Patty explained she taught for thirty years, had been with the virtual organization for over ten years, and was very familiar with the course she represented. "I wasn't brand new with online, and I definitely wasn't brand new with (the course I represented)." Joanna shared

her own professional evolution in conjunction with the evolution of the organization, “I have had the privilege of going through this whole, long journey. I would say, probably 14-15 years now. Maybe, I've been here 1-2 years less since the (organization) existed.” Beth taught the course she represented since she began teaching with the virtual program ten years ago. “I've been teaching this English course the whole time I've been in the organization,” she said.

The leadership roles participants’ held at the program were identified as another guiding factor for organizational staff reaching out for their participation. Patty recalls the Head of the Curriculum Staff asked her directly to participate as a Course Representative. “I think I was asked, to be honest, because I was Course Lead at the time.” Randall also remembered the Head of the Curriculum Staff asked him directly to participate. He acknowledged the request made sense given his connection to the course. “Okay, I'm the Course Lead. I should probably do this,” Randall said.

Five participants, including Patty, Joanna, Barry, Beth, and Randall, were the lead teachers, or “Course Leads,” of the organization-based master courses they represented during a QM review. Patty described the duties of the Course Lead role. “(In this role), I try to keep a cohesive unit for the group. I keep everybody (teaching the course) up to date … and discuss things specific to (our) course.” Beth further elaborated on her Course Lead experience and shared the types of discussions she might facilitate with her teaching team.

> When we meet, we discuss (the course) and see where there may be some areas we need to improve or work on. We have gone through and found resources that could be used in feedback as extensions to learning or additional support for students who are struggling. We've worked on some shared announcements (emphasizing) different skills that we need to focus on. We've seen as a constant, semester after semester, areas that (students) could use additional support for.

Joanna perceived her responsibility as a Course Lead as an opportunity to maintain the currency of her World Language program and to discuss the best way to update parts of the course and refresh instructional practices that might grow outdated. “(My team and I) are always thinking, ‘How do we promote our program?’ ‘Where is our program going?’ ‘What's new?’”

Randall talked about how the team of teachers he advises in his Course Lead role often come to him with questions and concerns that arise when teaching a course. “Other teachers on my (teaching

team) send me messages and say, ‘Hey; I've got this problem. What do you think we should do about it?’ Or ‘I found this in the course. What do we need to do to fix it?’”

Two of the seven participants, Stephanie and Emily, were not Course Leads for the courses they represented, but both had experience serving as Course Representatives on multiple reviews for the organization. Additionally, they served in a contract capacity as mentors for other teachers who were participating as Course Representatives for the first time. Stephanie was an Instructional Leader for the Arts Department and part of her role involved supporting teachers in daily instruction. Stephanie recalled being asked to participate in multiple reviews for the Arts team and eventually mentored other teachers from different subject areas on the Course Representative process. Emily, who served in a contract support role for curriculum development, recalled being specifically assigned to serve as a Course Representative for multiple reviews as a part of her curriculum development support role.

Participant-based factors

All seven participants identified organization-based factors that drew the attention of the full-time staff who sought their participation as Course Representatives. Additionally, all seven participants identified personal factors that led to their participation, including acquiescence, a nominal incentive, curiosity, and an interest in improving a course. Four of the seven participants explained they acquiesced. Although participants were Course Leads or leaders in other areas of the organization and found the Course Representative experience to be a logical extension to their work at the organization, they recalled they were not under contract obligation to serve as Course Representatives. The QM Course Representative Training overview also affirmed the voluntary nature of the work in the course opening, “Thank you for agreeing to be a part of the Quality Matters Course Review process.” “Agreeing” implied a willingness to serve instead of service as a requirement. The only exception to voluntary participation was Emily. Emily explained she was assigned the Course Representative role as a part of her existing contract curriculum development support role duties.

Stephanie recalled being asked directly to serve on both Art course reviews and then agreeing to support other teachers after the Curriculum Staff suggested she would be good in a support role since she

was successful on past reviews. Patty, Barry, and Randall shared they were initially reluctant to participate but acquiesced because they recalled kind and consistent requests, or the stipend appealed to them.

Barry shared his initial uncertainty. “I thought, at first, I didn’t want to do it. Because it is a lot of work,” he said. “I believe (the Curriculum Staff) asked me nicely, a number of times until they finally wore me down. So, I finally said, yes.” Randall narrated the conversation of how he was asked because he was a Course Leader and eventually agreed because of a kind request and small monetary incentive. “At first I was like, ‘No. Go get someone else.’” He recalled the Head of the Curriculum Staff explained she tried. Randall continued the story. “She was like, ‘No one else will do it. Will you please?’” Randall agreed since his role as a Course Lead felt like a natural fit, and there was also a monetary incentive. “It did pay something, at the time.”

Although acquiescence to participate was identified as a common theme, it was not the only factor for participants. Four of the seven participants revealed participating piqued their curiosity. Beth remembered the full-time Curriculum Staff asking her to participate, and she explained she held no reservations. “I was curious about (the QM) process… I wanted to see and take a deeper look at it and see what the process really was like.”

Patty shared an interest in learning new technologies and processes. Although initially concerned about the unknowns of participating as a Course Representative, she admitted she had a natural interest in learning new things in the field of education. Patty shared, “I like to stay on top of things - of education and trends and what are the neat new games to play. What does the research show is a good way of learning something?” Randall explained the process “sounded important” and was curious about the professional gain of participating. “This looks really good as a resume item,” he suggested.

Joanna learned a while ago about the QM rubric and review process and was very interested when she was asked to participate. “I heard a lot about Quality Matters™, but I was not involved with it (before),” Joanna said. She remembered hearing positive things about Quality Matters™ and was intrigued by the prospect of serving as a Course Representative for her own professional enrichment.

"Quality Matters™ has proved itself to be a standard in the online industry. So, of course, you want to be more knowledgeable about it."

In some cases, it was not just curiosity, but a genuine interest in improving a course for the better that attracted teachers to serve as QM Course Representatives. Informing course improvements was another inductive theme addressing the first research question. Three participants described their interest in updating course content to prepare for a QM peer review. Barry explained, "This was an opportunity for me to have a real hand in guiding how I thought the (course) should go."

After Stephanie served as a Course Representative for a General Art course, a course she did teach, she was interested in leveraging the Course Representative process to review and improve other courses in the Arts Department, a department in which she served as an Instructional Leader. She wanted to serve as the Course Representative for a Specialized Art course, a course she never taught before but was "kind of curious about," and she perceived her participation as a professional opportunity to improve a course in her department that had not received substantial updates since its initial design.

> (The Specialized Art course) probably had not been updated since we moved to the (current LMS). It was taught by one person, and it was a great course, but it did not have any kind of alignment, so far as I knew, done up to that time. So, I really did have to go in. A lot of what was written (in the Specialized Art course) needed some updating anyway, regardless of Quality Matters™.

Beth also wanted a chance to improve the course she represented prior to the review to make it more engaging and accessible for students. Beth recalls several of the content updates she made before the review.

> I made sure to have guided notes for everything. I made sure to have visuals(…)I even did recordings, explaining assignments to (students) because sometimes (students) want to see it, hear it, and be able to process it that way. I did recordings of explanations of assignments that are more difficult, and I see have been a struggle. In some places, I had to revamp entire modules to meet the standards.

Mutual factors

All participants recalled the full-time Curriculum Staff sought their participation as Course Representatives and all participants explained professional experience and leadership as factors leading the Curriculum Staff to reach out and request their respective participation. Although they were asked to

participate, almost all participants voluntarily “agreed,” as the introduction of the 13-component training course affirmed and as participants disclosed in interviews. The one exception to voluntary service as a Course Representative was Emily. She held a withstanding role in curriculum content support, and the Curriculum Staff members overseeing her work assigned her the tasks of representing courses and supporting other individuals as a part of the withstanding role. There was some variability among participants as to whether acquiescing to a request, a monetary stipend, curiosity, or an interest in improving a course, or a combination of multiple factors led them to agree to participate as Course Representatives. However, one common theme among all participants was philosophical alignment with the virtual organization. Philosophical alignment was a significant finding that addressed RQ1, and the upper-level theme of philosophical alignment included three sub-themes: high professional standards, an online teaching philosophy that complimented the virtual organization, and a distinction between effective instructional practice varied between online and in-person. As teachers discussed online learning, they detailed perceptions about virtual practice they believed complemented the goals of the virtual organization.

Participants revealed high professional standards as they discussed rigorous routines committed to reaching students. Barry described how he begins his day at 5 AM before leaving for his full-time role, so he can provide feedback and ensure contact with students are up to date. Beth, Randall, and Joanna discussed their weekly commitment to calling students and stakeholders, particularly if students are falling behind. Joanna explained how communication was a natural extension of her grading and assessment. “I always look through the gradebooks, and see who's submitting assignments, who’s not submitting assignments, so that maybe you have to make some calls for students, parents, and schools to see what's going on,” Joanna said.

Stephanie described her student-centered philosophy that she felt complimented organizational expectations. “I like to not have the kids just learning art or (the subject) but learn about how those things can permeate into their world and into their life.” Additionally, she shared that the organization

encourages live teaching sessions, and although live teaching is not a requirement for her subject area, she believes it to be an important endeavor to reach students.

"I find that there are some students who just love the live sessions." Stephanie also explained that she tries to make the sessions as accommodating as possible, "I don't require that kids show their face or that they… or that they respond at all. But I do ask questions during the live session that they can respond to in the chat."

Stephanie's description of live sessions also acknowledged key differences between online teaching and in-person teaching since audio-video mediums are often the only means to connect synchronously with students. Emily, who was assigned the role of Course Representative as an extension of her existing curriculum support role, beamed about the training opportunities for teachers that supported their understanding of online teaching practice and how it differs from in-person teaching practice. "(Our organization) does an amazing job, I think, training their teachers. We have set monthly meetings. (Our organization) always has those little snippets of best practices. They are one of the best for being at the forefront of new tools and new initiatives." She implied her experience and training with the virtual program guided her practices. "I always include a welcome video. I want the kids to see my face. I definitely want them to know what I look like, what I sound like."

Patty also identified distinguishing features between online and in-person learning as she described how she strives to engage online learners. "When you're online, it's two-dimensional. And I feel like it's my job to figure out how to make a two-dimensional space feel more three-dimensional. And that's what I strive to do." Patty also shared the opportunities the virtual program has provided her to connect with other virtual educators "My most favorite part of (a conference I attended through the organization) was getting a chance to talk with the people that we had in our small group. I felt like that created a greater understanding in my mind of the organization, not just from a theoretical perspective, but more from a personal perspective."

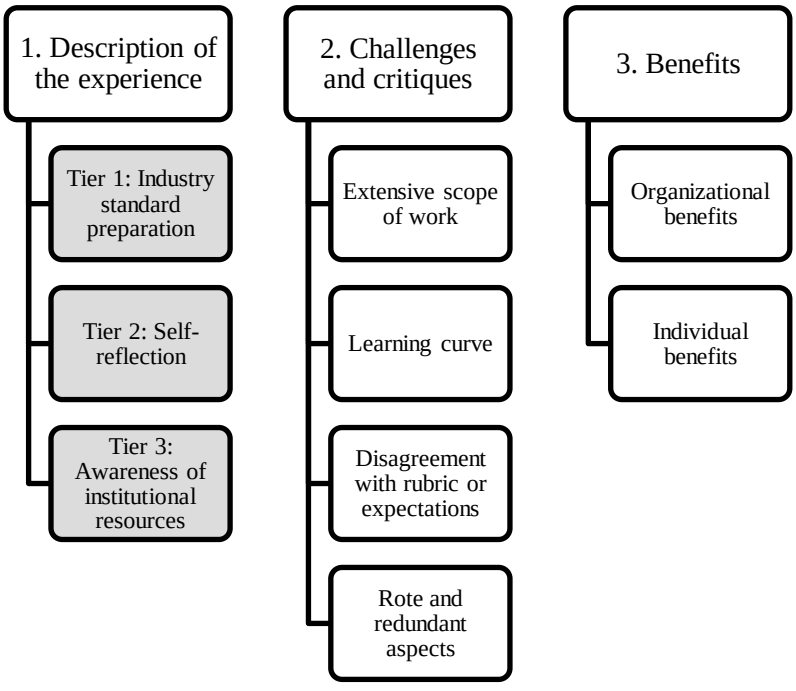
All participants shared beliefs about online teaching and learning that aligned with what they perceived as standard professional expectations for the organization. Participants shared the importance of

maintaining high professional standards through maintaining professional routines to ensure consistency, availability, and visibility for students. They also implied their beliefs were forged from routines established through core expectations set forth by the organization. A philosophy about online teaching and learning that corresponded with the virtual program was a consistent theme and a leading factor for participation for all study participants.

RQ2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

The second research question of this study asked: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives? Findings addressing RQ2 detailed what participants experienced and perceived during the Course Representative process. Three upper-level themes were identified to address this question including a description of the shared Course Representative experience, perspectives on the challenges and critiques of the experience, and perceived benefits of the experience. The description of the Course Representative experience also corresponded with the first three tiers of the Ali and Wright (2017) model. Figure 6 presents themes addressing RQ2.

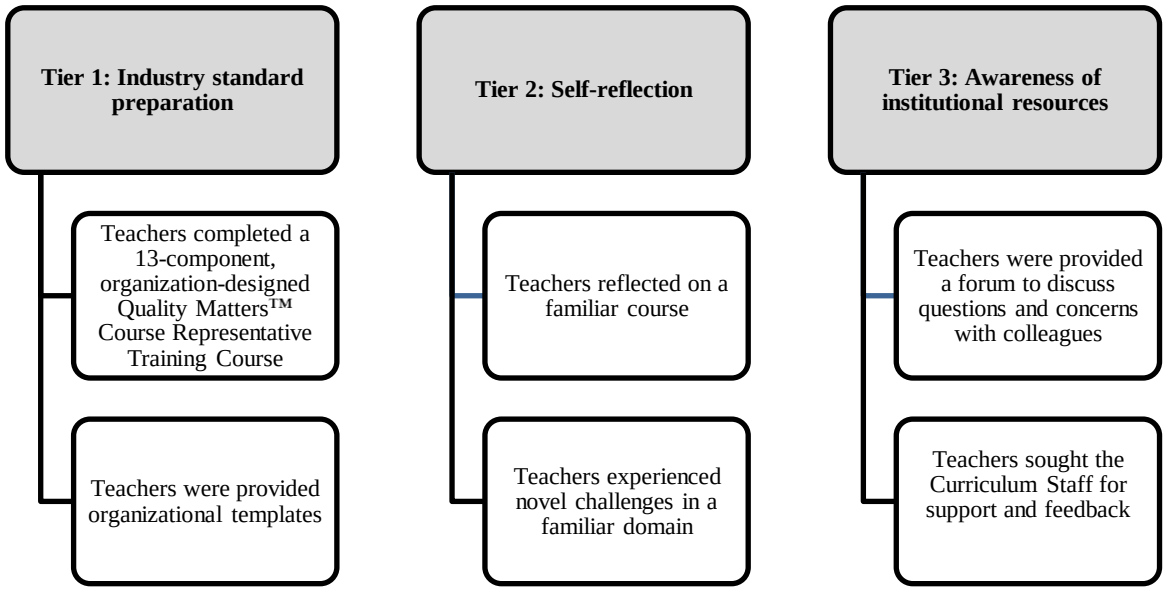
Figure 6: *Themes addressing RQ2. Gray scale boxes inductive deductive themes aligned with Ali and Wright (2017) model.*



Description of the Course Representative Experience

The first upper-level theme addressing RQ2, was descriptive in nature and provided a shared recall of the Course Representative experience. The description of the experience also presented inductive findings that corresponded with deductive themes described in the first three tiers of the Ali and Wright (2017) model. As participants described the training, support, and expectations provided for Course Representatives, they alluded to industry-standard preparation (tier 1), self-reflection (tier 2), and awareness of institutional resources (tier 3) (Ali & Wright, 2017). Figure 7 below presents an adaptation of the first three tiers of the Ali and Wright (2017) model and how participants described the preparation, self-reflection, and awareness of institutional resources provided throughout the Course Representative process.

Figure 7: *The first three tiers of Ali & Wright's (2017) model reflect the participants' descriptions of the Course Representative process, the first theme addressing RQ2.*



Industry Standard Preparation

As they began the Course Representative process, the teachers completed a 13-component, organization-designed Quality Matters Course Representative Course, which included a link to an external-facing copy of the QM rubric available on the QM website. Document analysis of the training

and the associated templates affirmed a lock-step process in line with Course Representative expectations and the organization's guidelines to fulfill rubric standards. The organization-designed training provided the industry-standard preparation defined in the Ali and Wright model (2017). Beth described the organization-designed training:

> I know I went through a bunch of modules to learn about (the process). I went through training to learn what the expectations were, and there were different pieces and levels of the training in which I learned about the process of Quality Matters™ and the expectations for it (including) what the outcome would be and what my role in it would be.

Randall shared a similar description of the training. "We had an (LMS) course, as I recall. It basically walked us through all the expectations and what we were supposed to turn in." Stephanie, who served on multiple reviews and mentored teachers serving as Course Representatives for the first time, recollected the virtual organization evolved the training since she first served as a Course Representative. "I think there was just a meeting with the first (experience). It was probably just a group meeting with some curriculum people, kind of pointing out some things for me to work on." Stephanie further explained to prepare for her second experience as a Course Representative, which occurred in the six-to-twenty-four-month time frame requirements of the study, she was provided an online training course prior to beginning the peer review application process.

In addition to the training, teachers were also provided a Google Drive folder of document templates to prepare for the official review. The templates included a standards alignment chart for mapping course standards and objectives, a draft of the Course Worksheet, course objectives, and a template. The templates were introduced in the training and allowed teachers to draft peer review documentation and receive feedback from the Curriculum Staff prior to completing the official application for review. As Barry half-joked, "Templates were provided, right? All I had to do was fill in the stuff where I was supposed to fill in stuff."

Self-Reflection

Sometimes, it was not as easy as "filling it in." Participants recalled the training, or industry-standard preparation (Ali & Wright, 2017) did go over broad details of the Course Representative process;

however, Beth noted the variability with the content and design of organization-managed master courses as a limitation to applying the training in practice. “Part of what was shared with me was not for English (courses),” Beth said. Clarity of expectations that could not be drawn from the industry-standard preparation led to reflection. Self-reflection, the second phase of the Ali and Wright model (2017) provided teachers an opportunity to assess their prior experience and emerging new knowledge as they engaged in a new process in a familiar domain (Ali & Wright, 2017). All seven participants identified parts of the experience that presented opportunities for teachers to engage in self-reflection. Patty, an educator with 30+ years of experience, admitted she had never served on a standards alignment committee before, and the task of aligning her course to state standards felt like a novel task in a familiar domain. “This was drilling down on a different level,” Patty explained. Barry also recalled the self-reflection required to determine how a course he taught for a long time matched up to the prescribed standards. He described the specific act of reflection. “I had to look at the (course) standards and see what they were expecting, and if our stuff fitted or fulfilled that requirement. And if it didn't, I was able to reflect and figure out how and what we could do to meet that standard.”

Joanna recalled the familiarity she had with a course she taught for a long time and the tendency to take for granted what is clear and explicit in the learning experience provided in a course. “We should not assume that somebody understands something because we understand it,” Joanna explained. Joanna further shared that the process provided an opportunity for her to feel professional discomfort that would eventually enrich her professional experience. “I really loved the (QM) project process, even though it's uncomfortable.”

Randall shared that the insights of an outside party received during the QM review helped him better reflect on where there may be gaps of understanding or areas of improvement needed in the course and in overall instructional practice. “(The process) did give me a lot of information about what an outside entity expects to see happening,” Randall said. Beth expanded and described her reflective process:

> You reflect and think and analyze your course to see if you are really addressing the standards. Are you really aligning across the board? Are your goals measurable, for instance? What is it you're expecting the students to? What is the outcome that you're looking for? It makes you think about the course in so much depth and detail. I do think it's extremely beneficial.

Awareness of Institutional Resources

The gaps in industry-standard preparation and the opportunity to reflect prompted teachers seek out institutional resources as they identified knowledge gaps during the Course Representative process (Ali & Wright, 2017). Throughout the 13-component training, participants were reminded four times to reach out for support. Additionally, the training included a discussion forum where they could share concerns with their colleagues, or the Curriculum Staff could provide direction. Participants affirmed the explicit offers of support and perceived the curriculum staff as an institutional resource they could depend on. Patty recalled her sense of reassurance, knowing she had someone she could turn to as questions arose throughout the peer review. “I started working more closely with the head of the Curriculum Staff, and I found that to be very pleasant, and I appreciated that. She's very responsive. She has a like-minded, organizational kind of mind, like me.”

Barry who initially joked he had the documents and all he had to do was “fill them in” rebuked his own missteps in fully understanding the process explained in the organization-provided training. “I'm the kind of person that tries to read things, and I don't know if do a very good job with reading comprehension. But then I have to start to do it.” Although the training went over the steps of the Course Representative experience, Barry explained, it was not until he started working through the process that he realized his gaps in understanding. He recalled the support the assigned Curriculum Instructional Leader, a virtual program teacher with extensive experience in writing fully online course content serving in a contract leadership role to support the Curriculum Staff, provided him. “My Curriculum (Instructional Leader) seemed to have the patience of Job and was willing to work with me.”

Randall did perceive the training to be sufficient in preparing him to serve as a Course Representative, but he said he still needed to lean on the Curriculum Staff to clarify processes along the way. “I don't remember having any major issues as I was going through (the training). I think I did have a

few times where I was like, ‘Ask (the head of the Curriculum Staff): Hey is this what you're going for, or what are we looking for here?’”

Beth said the Curriculum Staff and team supported her through the multiple mistakes and challenges she experienced. “There were some things that I did incorrectly and had to revamp, so all of that was kind of a learning process along the way. I had (the Curriculum Staff) there as my support as I was going through the process.” Additionally, Beth explained talking to other teachers in her subject area helped her better understand the expectations of preparing her own course.

Joanna shared that the support and resources provided were in line with what she had come to expect from the virtual organization. Not only were opportunities like QM participation provided, but ongoing semester training and supplemental learning opportunities for virtual teachers provided her with resources to enrich her practice. Joanna explained:

> I've been with (the virtual organization) for such a long time, and the (organization) doesn't seem like a static school. It’s not like you get here, and you learn what to do and it's exactly the same semester after semester. Every semester we have to complete something. Maybe sometimes people feel like, ‘Oh, it's just more work,’ but honestly from every training there is more information added to help improve the quality of teaching.

Emily, who recently completed a degree in Instructional Technology, perceived the resources the virtual organization provided to develop and enrich online instructional practice to be superior to the Higher Education coursework she completed. Emily shared:

> (Our organization) does an absolutely amazing job, I think, of training their teachers. We have set monthly meetings. They are always having those little snippets of best practices. They are one of the best for being at the forefront of new tools and new initiatives. They have done a really great job. I do have a Master's in Instructional Technology. And believe it or not, I think (our organization) does a better job training teachers (than where I completed my Instructional Technology degree).

Stephanie and Emily were themselves an institutional resource when they served as mentors for teachers working through the Course Representative experience for the first time. They had prior experience serving as Course Representatives and could guide teachers through challenges specific to a respective course and situation. Stephanie perceived her role as a mentor for Course Representatives to be a beneficial resource teachers could turn to if they ran into challenges. “I do like that there is support for

the teachers with a peer leader," Stephanie said. Emily recalled that because she had experience as a Course Representative, she had insider knowledge including the annotations provided in the Quality Matters™ CRMS. Since teachers only had access to the external-facing rubric as they were preparing a course for official review and before the QM peer review application was officially initiated, Stephanie could mentor teachers who were drafting template documents and better explain how a course could present the QM standards. Emily spoke specifically about her role as a coach and resource for teachers to help Course Representatives with meeting Specific Review Standard 3.4 C: *Multiple methods of assessment strategies are included* (Quality Matters K-12 Rubric 5th Edition, 2018). Emily favored this standard because it stressed variety in course assessment options for students. However, she recalled teachers leaning toward her experience to clarify what this might look like in a course and how multiple methods of assessments could be set up in a fully online course. "I guess this is where I, as a curriculum leader, would come in and try to supplement that (for teachers)."

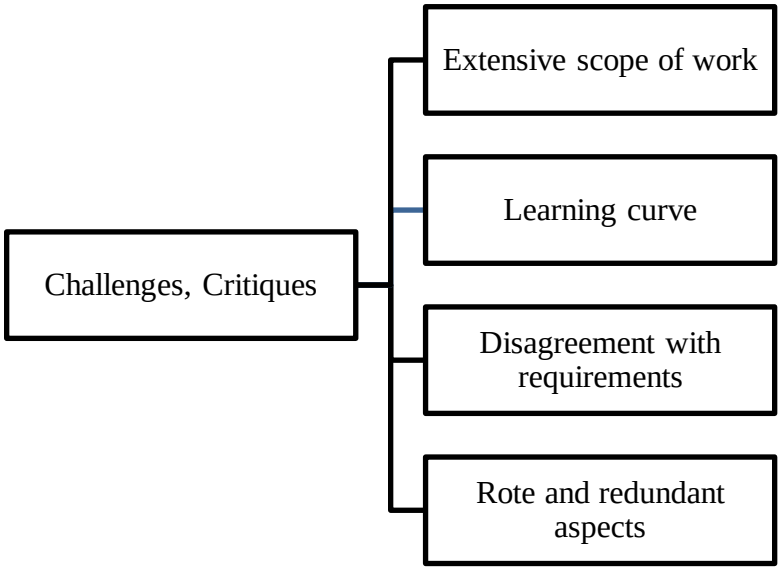
Institutional support was also evident in the 13-component Course Development training and the template documents. Throughout the organization-based QM Course Representative Training course, participants are reminded to reach out to Curriculum Staff members and a designated curriculum support contractor for support. Document templates also included color-coding dialogue and in-line comments that presented questions and clarification between Course Representative participants and the supporting staff.

Challenges and Critiques of the Course Representative Process

As participants described the process, including the industry-standard preparation, their self-reflection, and their awareness of institutional resources, they also identified several challenges with the Course Representative process. Although they were experienced teachers, their course design experience varied, and all participants faced novel challenges throughout the Course Representative experience. Additionally, they also perceived criticisms with the process and program expectations to fulfill certain standards. The extensive scope of work, the initial learning curve, disagreement with requirements, and

rote and redundant aspects, detailed in Figure 8 below, were identified as four sub-themes detailing the challenging and critical aspects of the Course Representative experience.

Figure 8: *The second upper-level theme addressing RQ2, Challenges and Critiques, included four sub-themes: the extensive scope of work, learning curve, disagreement with requirements, and rote and redundant aspects of the process.*



Extensive scope of work

Participants described an extensive scope of work, particularly in the lead-up to the actual QM peer review. Before they could even submit a course for review, five of the seven participants, including Barry, Beth, Randall, Stephanie, and Emily had to make several content updates to ensure the course could potentially meet standards. Barry revealed, "It was a lot of work. It was just one more thing to add to the day."

Beth concurred:

> The revision piece was a lot. I did the work for almost a semester. We had to extend the process because it was more than I thought. I worked a lot on (the course). I mean, my nights and weekends were revising the course for a semester.

Randall remembers having to replace content, particularly external links, that were featured in the course since he started teaching it. He shared the dialogue exchanged with the Curriculum Staff.

> I would tell (the Curriculum Staff), 'Hey we need to fix this.' And their question wasn't, 'Okay, well what's wrong with it?' They're like, 'No. Where did this document come from originally?' 'I don't know. I downloaded it out of the course." And they're like, 'No. This came from some

> website, and it's not cited, and there aren't terms of use or the terms of use (are such) that we can't use.' And I was like, 'I don't know. It's been in the course since we started.

Initial document analysis confirmed a pattern of variability in experience depending on the condition of the course and alluded to the extra requirements required to prepare certain courses for a successful review. As Randall explained, there were instances in courses where outside sources required proper attribution or complete replacement to meet very important, Specific Review Standard, 4.5 C: *All instructional materials used in the course are appropriately cited* (Quality Matters™ K-12 Rubric 5th edition, 2020). To meet 4.5 C, two participants, Randall and Emily, completed a document listing materials that did not have proper attribution. They were asked to either provide an appropriate reference to be placed in the course or find a replacement that could include a proper reference.

Additionally, to meet required Specific Review Standard, 8.4 C*: The course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners* (Quality Matters™ K-12 Rubric 5th edition, 2020), Randall completed a document verifying a list of videos that needed captioning and checked off in the document when captions were updated. Barry also recalled having to update closed captions for videos to meet 8.4 C and explained the time it took to learn how to update captions in the streaming tool and relisten to videos through to edit captions.

Beyond captions and citations, participants sometimes had to provide more extensive course revisions. Stephanie completed a chart-based document that identified standards and objectives that were not presently met in the current course master of a specialized art course she represented. If a course set for official peer review did not meet all prescribed subject standards, participants like Stephanie were expected to document the missing standards and objectives and update or provide instructional materials, activities, and assessments that could meet the prescribed standards for the course. Pushing in content elements to meet alignment supported four QM General Standards: General Standard Two, Three, Four, and Five (Quality Matters™ K-12 Rubric 5th edition, 2020). Stephanie recalled in her interview, "The (specialty) art course had probably not been updated since it moved to (the current LMS)." Stephanie

further explained, “It was taught by one person and was a great course but did not have any kind of alignment, so far as I knew, done, up to that time.”

Stephanie shared that the course updates also added an additional layer of confusion beginning the Course Representative process. “It was a little confusing in the beginning, especially because I had not done that kind of curriculum work before.” However, after Stephanie successfully completed a QM review as a Course Representative, she contracted with the organization to support teachers participating in course reviews during a period when the organization was placing many courses through official peer review. She recalled some of the initial challenges teachers had with updating courses. Because course content updates had to occur in an organization-managed master course, teachers were required to complete documentation requesting updates. Requested updates often required writing instructional materials, activities, and assessments that could be integrated into the current course LMS and lesson authoring tools. “(The process) took them a while to get used to,” Stephanie explained. She also recalled her support of a specific teacher learning the process. “One teacher, I spent hours on the phone with her. She really did not understand how the whole process worked and was not someone geared to do something like that.” Stephanie further explained it was the course content updates that seemed to cause the most frustration. “There were certain changes she needed to make (in the course), and she had to (document) things a certain way.”

Learning Curve

Stephanie’s description of the frustrated teacher also disclosed another challenge teachers experienced: the learning curve of a new process. Five of the seven participants referenced a learning curve as they learned the responsibilities of serving as a Course Representative. Barry articulated his learning experience:

> There are a lot of forms and a lot of places to put different things. You put things where you think they should go, and they’re not where they are supposed to go. There are also certain procedures you need to follow to update (course content).

Barry recalled the initial challenges resolved as he continued pushing through. “It was a rocky couple of weeks… but afterward, it was fine.”

Before Patty served as a Course Representative, she explained she knew “zero” about Quality Matters™. “I knew nothing. That's what made me apprehensive because I'm like, ‘I don't know what this review process is, and I don't want to mess it up.’” She remembers her early concerns and recalls that her initial point of contact to support her process was not very responsive. “I was really, really flustered.” Patty recalled asking herself, “What have I gotten myself into?” She also remembered saying to herself on a couple of occasions, “I am not sure I am the right person for this role.” However, once she received support directly from the organization’s Head of the Curriculum Staff, her feelings changed, “Oh, yeah. I can do this.” Patty further articulated her perception that the review process is methodical and requires the right person who can commit to staying organized. “A successful review is probably going to require somebody who's detail-oriented and who doesn't miss anything,” Patty said.

Course variability was a pattern established in the analysis of course documents and identified a factor for the perceived scope of work. Course variability was also a consideration for the learning curve of participants. Although document analysis revealed the virtual organization did furnish organization-based templates and a 13-component training course to prepare teachers for the Course Representative process, the variability with the content and design of organization-managed master courses often made parts of the training not easily transferable to practice. “Part of what was shared with me (for training) was not for English (courses),” Beth said. “Then teachers from English showed me what they did, and it was just very different.” Stephanie also recalled the learning curve impacting most of the teachers she supported through the process for the first time. “For some of the teachers who (were) Course Representatives for the first time, I think it can be a really confusing (process), especially if it's not the kind of thing you've done before.”

Disagreement with Requirements

Not only did participants experience a learning curve, but four of the seven participants addressed specific aspects of the rubric or requirements to meet these standards with which they did not fully agree. In some cases, points of disagreement also suggested learning curves in understanding the significance of certain standards on the virtual learning experience. For instance, Stephanie was skeptical of the

organizational requirement to hyperlink the title of a website instead of hyperlinking the URL of the website. The organization sets up course hyperlinks according to content title or hyperlink purpose to comply with accessibility guidelines established in Web Content Accessibility Guidelines (Web Accessibility Initiative, 2023) and to fulfill QM General Standard Eight: Accessibility and Usability (Quality Matters™ K-12 Rubric Fifth Edition, 2018). Stephanie shared her perspective:

> One thing that I thought was interesting that came back in the review was when there were external links, they wanted us to have those links named rather than having the actual link showing for the students. Personally, I feel sometimes, that's a good idea, especially if it's a very long link, but sometimes it's good for the students to know some of these websites (by URL) that will be helpful to them in learning more about their art.

Stephanie's perception of the organization's priority to present hyperlinks according to the title reflected both disagreements with requirements as well as the learning curve of participants. Similarly, Beth recalled the required wording of course and lesson-level objectives (to meet General Standard Two) as a hang-up to initially receiving QM certification. She recalls the course she represented required an amendment to the initial review because of "something silly… (and) minor." "It was one of the goals or objectives that was listed." Beth remembers the word "understand" used in the objective. "It was more the terminology, and it was not anything major." Although Beth was not fully convinced of the significance of the terminology, Conklin and Barreto (2023) have concluded that writing objectives according to a measurable expectation as foundational to guiding assessments and activities in a course. Like Stephanie, Beth also reflected a learning curve in fully understanding the rationale of certain rubric standards.

Additionally, participants may have disagreed with the emphasis on the "forefront" of course standards and objectives. Emily explained she understood the necessity of standards and objectives and course alignment, but she had concerns with what she perceived as the prominence of course standards and objectives in organization-managed master courses. She perceived this emphasis to take away from the learning experience. Emily explained:

> I feel like the kids don't even get to the lessons until four clicks in, and honestly after four clicks in, they are already zoning out. I don't love the way that they require objectives and alignments to be so, so present and student-facing.

Joanna also noted what she perceived as the rubric's emphasis on conspicuously presenting objectives and how students might overlook the learning objectives. "The (QM) rubric did stress a lot - showing the objectives of the course and how objectives are linked to the (subject) standards. I don't really think students are paying much attention to this."

Emily also shared skepticism about how the organization expected courses to meet Specific Review Standard 5.3 C. *Learning activities provide opportunities for learner-instructor and learner-learner interaction* (Quality Matters™ K-12 Rubric Fifth Edition, 2018). She explained her own beliefs about online teaching and learning and the importance of students being able to see and hear virtual teachers. However, she clarified her perspective that the "Meet Your Teacher" discussion forum that the organization has teachers place as a standard in courses to support 5.3 C and other course-based discussions may not benefit instruction. A welcome discussion board she set up as a requirement for the external peer review was shared and elicited a response during Emily's interview. "I don't necessarily agree that we need a welcome discussion board. To me, it's a little nonacademic and adds an extra workload to the students. But we are told to have a welcome discussion board."

Emily was also concerned with the level of detail required in a welcome announcement. She was concerned it would overwhelm a learner. While discussing a welcome announcement, she says the organization required she placed in the course for the QM review, Emily shared her perspective.

> (This announcement) is a very standard (organization) announcement. I do understand that we are taught to do it this way because it aligns with QM. I probably wouldn't do it outside of QM. I feel like a lot of that stuff (included in the announcement) is intuitive, and I feel like these first announcements get a little lengthy, and the students stop reading.

Additionally, Stephanie shared concerns about the course syllabus requirement that the organization standardized to meet most of General Standard One: Course Overview and Introduction (Quality Matters™ K-12 Rubric Fifth Edition, 2018). Stephanie perceived the expectations and details required for a course syllabus as potentially overwhelming for a learner. During Stephanie's interview, she provided elicit responses to a few syllabi she had provided for courses she represented. "I know that

the syllabus must be there and (must) be written correctly. At the same time (…), it's not something I look back on that much."

Rote and Redundant Aspects

Common forms and templates examined during document analysis presented a lock-step and standardized process, and while the documents were intended to guide a successful review, some participants described parts of the process as rote and redundant. Five of the seven participants shared concerns with some of the repetitive parts of the process, particularly the templates that had to be completed in a precise way. Barry recalled the volume of documents and redundancy among different forms. Learning all the forms and bearing through seemingly repetitive parts of the experience was also part of the learning curve. Barry explained:

> There are a lot of forms and a lot of places to put different things…Part of my frustration... but part of (the Curriculum Staff's) frustration too (was) that I was having problems putting things in the right spot.

Beth also perceived some of the templates and spreadsheets provided to prepare a course for review as repetitive. There were occasions where she felt she was duplicating processes. "I felt like I was doing something wrong when it was repeated (in) some other (form)," Beth said. Randall concurred with the repetitive nature of tasks and recalled sometimes self-selecting to replicate documents to ensure he was following the process accurately. In Randall's folder of support documents, he noted a few duplicates of forms and templates he intentionally created as personal drafts. He explained he harbored doubt he was doing things correctly the first time. "Yeah, there's a couple duplicates, but that tends to happen, I've noticed, in this process," Randall shared. Additionally, Emily, who also served as a mentor for teachers working through the Course Representative process, recalled frustration with some of the expectations she perceived as rote and tedious. "(The process), for me, was very redundant and repetitive work and not necessarily (a way of) familiarizing myself with course content. It was more (like) clerical organization."

The rote nature of certain responsibilities also drew some criticisms about the process. Two participants, Stephanie and Emily, remarked on the multiple documents and the multiple steps required to update content in a course. Noteworthy, Stephanie and Emily also represented multiple courses. In both

cases, their first Course Representative experience involved courses they do teach with the organization. However, consecutive reviews were for courses they do not regularly teach. Furthermore, because of prior experience, both Stephanie and Emily contracted with the organization to mentor teachers who were serving as Course Representatives for the first time. Stephanie's contract was a temporary contract with a set stipend, while Emily's mentoring role was an extension of her permanent contract in a curriculum content support role. Although she spent a significant amount of time engaging with the Course Representative process and the rubric, serving on multiple reviews and mentoring teachers, Emily was doubtful about the impact of the experience on her professional practice. When asked about the rubric's impact on instructional practice, she explained she perceived to impact to be:

> (Moderate), at best. It's definitely not a, 'Yes.' I don't want to say no; however, because I think of (the rubric) as more of a checklist, but I also understand that a checklist, like Quality Matters™, comes with a price tag, and I'm not a hundred percent sure that that price tag makes it a more effective learning environment.

Benefits for the Program and Individual

Although there were some challenges and critiques to the Course Representative process and the rubric, and Emily questioned the significance of the experience on her professional practice, most participants perceived the Course Representative experience as beneficial for the entire virtual organization as well as for individual teachers. Most participants found the time and cost investment to be a good value for the organization. Additionally, participants shared perceived individual benefits of serving as Course Representatives and learning the QM rubric that led to the third research question and corresponded with the Ali and Wright (2017) Online Faculty Professional Development model. Although perceived individual benefits were a part of the overall experience, particularly the external reward of participating in a successful review and receiving an official mark of quality, the individual benefits were experienced more significantly post-experience and present the professional development significance of the rubric sustained after the process concluded; therefore, individual benefits are directly discussed under RQ3 findings.

Participants shared the perceived organizational benefits of applying the QM rubric and submitting courses for official review for the organization. Joanna shared that the organizational benefits justified the cost of subscribing to QM and paying for each individual course to go through an official review. “I'm glad that (our organization) is working so closely with (QM) and investing in this process because I know this is a costly process. Some other (Higher Education programs) that I worked with had to decline it because of the cost. But I'm glad that (our organization) is doing (it).”

Stephanie shared her perception that having QM-certified courses provided a sense of credibility to the organization overall, “I think it's great to have that Quality Matters™ backing to the courses.” Randall concurred with Stephanie and perceived a QM certification as acknowledgment from an external party that organization-based master courses are well designed. “I'll say that maybe Quality Matters is more of confirmation,” Randall said. “That was cool to see that we were doing things that an outside organization took a look at and said, ‘These are the things you're supposed to be doing.’”

Barry appreciated the institution’s initiative to submit courses for review because it emphasized high course quality throughout the organization. Although Barry did express the amount of work to prepare a course for review, he did feel it was worth it. “The ends justify the means, right?” Additionally, Patty remembered her feelings of esteem when the review results came back, and the course passed. “It just made me feel a sense of pride, being associated with not only the process but with the institution,” she said. Randall felt the opportunity gave him something he could boast about in future professional endeavors. “I thought, this could be a good resume item.”

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

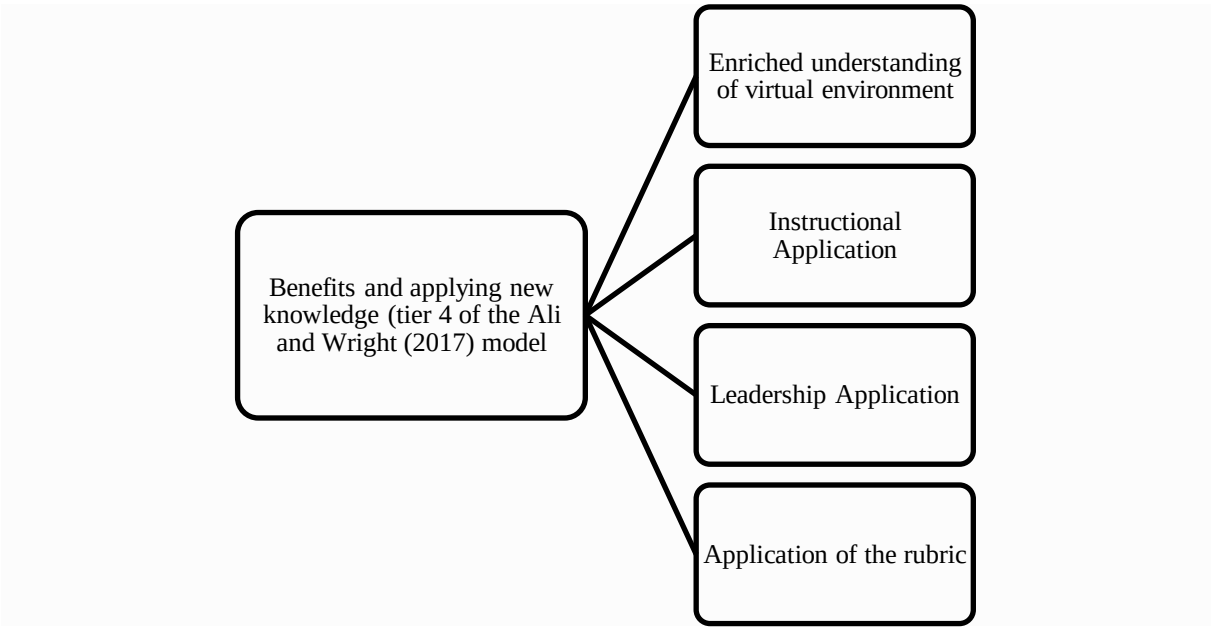
While there were outlier perspectives and shared criticisms and critiques, participants overwhelmingly perceived Quality Matters™ as a worthy investment for the organization. Additionally, they described individual benefits gained from participating as Course Representatives that could endure long after the QM review concluded. The discussion of benefits gained connected RQ2 findings with RQ3 findings. During the inductive coding process for RQ3, three themes emerged identifying what aspects of

the Course Representative experience teachers perceived as significant to professional development, including an enriched understanding of the virtual learning environment, application in instructional practice, and application in teacher leadership. The three inductive themes also corresponded with the top tier of the Ali and Wright (2017) Online Faculty Professional Development Model, applying new knowledge.

Benefits and Applying New Knowledge

As they described program benefits, participants revealed the personal reward of contributing to a successful external review. While receiving official notification of successful review might provide an immediate reward, all seven participants alluded to benefits that could be extended after a review concluded. These benefits suggested ways teachers could apply their experience in professional practice. At the pinnacle of Ali & Wright's Online Faculty Development model (2017) is applying new knowledge. The deductive theme of applying new knowledge was closely connected to inductive codes identifying individual benefits of the Course Representative experience: an enriched understanding of the virtual learning environment, application in instructional roles, and application in leadership roles. Figure 9 below presents emergent themes aligned to RQ3 as well as deductive codes from the fourth and highest tier of the Ali and Wright (2017) model, applying new knowledge. The themes demonstrate how participants perceive the significance of the Course Representative experience and how the knowledge gained can be applied in practice (Ali & Wright, 2017)

Figure 9: *Tier 4 of the Ali and Wright model presents personal benefits and aligns with the emerging themes addressing RQ3*



Enriched Understanding of the Virtual Learning Environment

All seven participants described an enriched understanding of the virtual learning environment following the Course Representative experience and their exposure to the QM rubric. Patty explained the detail required for the rubric helped her refine her understanding of course standards, "I had not been on any kind of standards revision committee." Patty elaborated she previously provided some content updates, participated in course writing teams, and served as the Course Lead, but the QM experience provided new insights. "(It was) drilling down on a different level to what we were trying to teach (students) and making sure everything was there that fit all the standards, and not just the standards for Quality Matters™, but the standards for the (course) curriculum," Patty said.

Barry also felt the experience provided him an opportunity to engage with a course he had long taught. The experience also helped him better understand standards alignment in a virtual course. "It was good in that I now know (my course) standard by standard. And I know that our curriculum meets every single one of those standards because we had to painstakingly go through each one."

Randall appreciated the opportunity of QM Course Representative experience as it led him to consider external perspectives of virtual teaching and a familiar course.

> The biggest change for me would be looking at things that we put in the course from the perspective of somebody from the outside who may have to look at this. So, we want to make sure that everything is up to par and in line with the norms that you would expect as far as things like, 'Did we pull in this information, or did we pull in this content from a website that has terms of use that don't allow (us to pull it into our course)?

Beth believed the experience allowed her to better understand the alignment in her course and perceived the experience as beneficial for new teachers. "I would say going through Quality Matters™ is something that would be beneficial for any teacher to do because of the depth you learn the standards (for your course) and see how the course aligns with the (prescribed state) standards."

Stephanie was able to better understand differences in design throughout her department. When she represented the Specialized Art Course, Stephanie learned more about a course she was certified to teach but had never taught. It allowed her to see how art standards could progress in a different course. "I was curious about (the Specialized Art course) as an artist and an art teacher."

Application in Instructional Practice

In addition to gaining a more enriched understanding of the virtual learning experience, all seven participants alluded to ways the Course Representative experience could support daily instruction. Several participants described professional routines as virtual teachers and alluded to key differences between virtual learning and in-person learning. "When you teach face to face you have the opportunity to have - I call it a three-dimensional teaching and learning experience," Patty said. "When you're online it's two-dimensional. It's my job to figure out how to make a two-dimensional space feel more three-dimensional." Joanna recalls the feedback she often receives from her online students about the virtual learning experience. "They tell me, 'I've taken other courses, foreign language courses in my school face-to-face, and with you, I had more personal attention. I had more speaking than in many of my face-to-face classes.' I think this is huge," Joanna said.

Joanna shared the Quality Matters™ Course Representative experience would be impactful for new teachers. "I honestly feel like if you take a new teacher who has not taught and who would go through this rubric, it is very helpful to become a good online instructor," Joanna said the checklist the QM rubric provides of what constitutes a good online course could also be applied to seated courses. "All

the aspects that they introduce here are just as important in regular face-to-face courses. I think it all supports good online teaching practices."

Stephanie said the expectations of QM are "always in the background and support daily teaching. I think (the expectations of QM) really help the teacher have a good foundation for adding more stuff." Stephanie further explained the rubric clarified expectations for course quality that allowed for a teacher to build on the learning provided in a well-written and well-designed course:

> If the course is written well and written well from the perspective of not only the student but also the teacher and has a sequence that can be understood and includes a lot of support that the students need in order to be successful… a good online teacher supplements as much as they can.

Joanna discussed the benefits of consistency, not only in the course, but throughout the organization, emphasized through applying the rubric. The rubric is about "making sure that there is consistency in the courses." Barry also liked the consistency in course design and instructional practice that he believed the rubric promoted. "I like the fact that Quality Matters™ provides some consistency for the different classes … so that everyone knows where everything is if they actually need to look at something." Organizational consistency was reinforced through the common syllabus templates, the common announcement features of welcome announcements, and the standard expectation of a "Meet Your Teacher" forum teachers used and discussed during the interviews Although there was variation in how teachers populated these items, they all included common elements to provide a clear overview of the course and establish structure for students.

Application in Leadership Roles

In addition to gaining a more enriched understanding of the virtual learning environment and gaining some daily instructional insights, six of the seven teachers referenced specifically how their experience could be applied in teacher leadership roles. The mentorship roles Stephanie and Emily held exemplified how virtual teachers were able to apply acquired knowledge as teachers leaders. Stephanie explained she mentored teachers from subject areas she was not familiar. "(These) were courses that I was totally not familiar with. There was a science course and a computer course, different kinds of things. And my experience with Quality Matters™ really helped me to clarify things for teachers."

Emily, who appreciated her insider access to the annotations in the CRMS, shared her access to the annotations allowed her to coach other teachers serving as Course Representatives for the first time. She shared questions teachers would ask directly or ponder themselves as they were preparing templates for the review process or developing online content for new courses adding updates to existing courses. "'What are my options for formative assessment?' 'Can I do it this way?' 'Can I do it that way?' And that's purposeful because there are multiple ways for formative (assessment)." She explained the annotations for each standard provided in the CRMS were not available to individual Course Representatives until they populated most of the organization-provided templates and the course review application was initiated. The prior access to annotations helped Emily "unpack" the rubric expectations and provide support for teachers who were preparing QM review templates.

Patty shared she took screenshots of some of the review feedback and shared them at her team meeting. Although the course she represented did pass on the first submission, she wanted to share some of the suggestions for improvement with her team. She detailed the conversation she initiated with her team:

> 'Look. This is what we did, and this is what they said. Let's take a look at these suggestions for improvement. No one's saying we have to do it, but let's go ahead. These people are learned people. Let's give their ideas some consideration, and let's take a look at what they're suggesting. What do we think?' And (the discussion) sparked quite a good number of conversations where we requested to make different changes (to our course) and created thought opportunities for dialogue. 'Should this, in the future be something that we look at when we make some changes? We know the standards are going to be changing at some point. What do we want to do with this feedback?' That, to me, was a great opportunity because it wasn't just me and the review team. That was me taking the (peer review team's) suggestions back to the whole (teaching) team, fostering great communication and idea-generating with our group.

Like Patty, Randall explained the Course Representative process allowed him to better guide his team in making future course improvements. "I think (this is) definitely a good process for a teacher, particularly a teacher in a leadership position to go through. It does help you understand the stipulations that go into the course developments and whenever we make changes to the course." Randall also explained he understood why the process to make course changes involved more oversight from the Curriculum Staff.

> At least I understand why it has to be that way and why (the Curriculum Staff) has to have so much control over what's going on because they're looking at this process. This is going to be looked at based on a set of standards from an outside organization, and we need to ensure that everything that we have in our course is aligned with those things. (The process) helped me understand the bigger picture of what's going on.

Overall, teachers perceived the Course Representative experience to be significant to professional practice. Most participants shared the experience enhanced the understanding of the fully virtual learning environment, provided takeaways applicable to daily instruction, and provided newfound professional knowledge they could push into leadership roles. Additionally, participants found certain aspects of the rubric to be significant to professional practice. The rubric's emphasis on standards alignment, overall focus on online course quality, and specific focus on online areas like digital accessibility provided insights that teachers could apply as they worked with students daily, mentored other educators, and considered future course improvements.

Application of the Rubric

In addition to reflecting on the impact of the rubric and the Course Representative experience holistically, all seven participants referenced specific aspects of the QM rubric that could support their professional development and professional practice. When referencing specific aspects of the rubric, participants also shared insights on how new knowledge could be applied directly in virtual teaching and in virtual leadership roles. As teacher leaders, they could pass down acquired knowledge while providing instructional coaching for other teachers throughout the organization. The findings further detailed how participants could apply new knowledge gleaned from the rubric (Ali & Wright, 2017). Table 6 below presents participant references to specific aspects of the rubric and how they contribute to course quality and online instructional practice. The table is organized by General Review Standards, but if a Specific Review Standard is directly referenced or implied, it is included parenthetically.

Table 7: *References to General Standards from the QM Rubric and how participants can apply these standards to directly support online instructional practice or indirectly support instructional practice while leading other teachers*

General or Specific Review Standard	Support of Online Instructional Practice or Teacher Leadership
General Standard One: Course Review and Introduction (Quality Matters™ K-12 Rubric 5th edition, 2020)	"The rubric is doing a good job emphasizing that everything has to be explained." - Joanna
General Standard Two: Learning Objectives Competencies (Quality Matters™ K-12 Rubric 5th edition, 2020)	"The state standards are what we need to pay attention to." - Stephanie
General Standard Three: Assessment and Measurement (Quality Matters™ K-12 Rubric 5th edition, 2020)	"(The process) also forced me to come up with rubrics and (answer) keys for all the assignments because there was nothing there (3.2 C). - Barry
General Standard Four: Instructional Materials (Quality Matters™ K-12 Rubric 5th edition, 2020)	"This rubric is really about making sure things like … instructional materials…are addressed." – Beth
General Standard Five: Learner Activities and Learner Interaction (Quality Matters™ K-12 Rubric 5th edition, 2020)	"(We) are making sure there are those interactions (5.3 C)" – Joanna
General Standards Six: Course Technology (Quality Matters™ K-12 Rubric 5th edition, 2020)	"In this rubric, it focuses on that technology piece, which does align with the (course) standards." – Beth
General Standard Seven: Learner Support (Quality Matters™ K-12 Rubric 5th edition, 2020)	"Our instruction might be different in the online world. The technology supports that are in place, things like that, are all a piece to what we do." – Beth
General Standard Eight: Digital Accessibility (Quality Matters™ K-12 Rubric 5th edition, 2020)	"Is our content fully accessible to any students that may come into it?' - Randall

Teacher Commitment

As teachers described the experience of serving as a Course Representative and learning the QM rubric and how their knowledge could transfer to instructional practice and apply in leadership roles, they discussed an ongoing commitment to the organization, the teaching craft, and the Course Representative process. Teacher commitment spans throughout Ali & Wright's (2017) Online Faculty Professional

Development Model and was implied as participants addressed all three research questions. As RQ1 findings revealed, all teachers were experienced teachers both in a building setting and online, and all teachers held leadership roles at the organization. They also acquiesced to participate and shared philosophies about virtual teaching and learning that aligned with the expectations of the organization. As participants addressed RQ 2, they described personal struggles experienced as Course Representatives, but they worked through the training, reflected on the limitations of prior understanding, and relied on organizational resources where needed. As they addressed RQ3 and discussed the significance of the experience to professional development, they expressed a commitment to applying new knowledge in teaching and leadership roles.

While Emily had some outlier views and was not sure there was a boon of professional gains from the experience, most participants shared experiences and perspectives comparable to Randall's summary, "I didn't go away feeling I wasted my time." Beth concurred. "Overall, the process was beneficial. I think it makes you really reflect and think about every single lesson and what is being addressed in every lesson."

Lapse of recollection of the experience

Although teachers described a detailed, multi-phase process, that overwhelmingly yielded organization and professional benefits and required sustained commitment, there were aspects of the Course Representative experience they could not remember. As they described an extensive process that often took months to fulfill, seven participants paused or stated they could not "remember" or "recall" details about the Course Representative experience or the rubric. While the lapse of recollection did not precisely address the three research questions, gaps in recollection were a significant finding that implied the Course Representative experience may have fallen into the grind of other work routines. The Ali and Wright (2017) model describes an enduring and transformative process rooted in professional growth and reflection. Although they carried out the procedures of a Course Representative, the participants had no set expectations or structured opportunities to consider how to dispense insights gained into instruction or

leadership. Some participants, like Patty, did share how she brought the discussion back to her teaching team, but a follow-up discussion was not an expectation for all participants.

Chapter Five Preview

Chapter Five will discuss the conclusions and implications of the study. Several findings underscored prior research on K-12 virtual learning best practices, recommended professional development for K-12 virtual teachers, and prior QM impact studies. Although the research inquiry was a case study and case study findings are site-specific, findings may provide some analytical generalizations (Brinkman & Kvale, 2014; Yin, 2014) regarding K-12 virtual teachers' experiences with the Course Representative process. These generalizations have implications for K-12 virtual educators and K-12 virtual program leaders and provide recommendations for future studies.

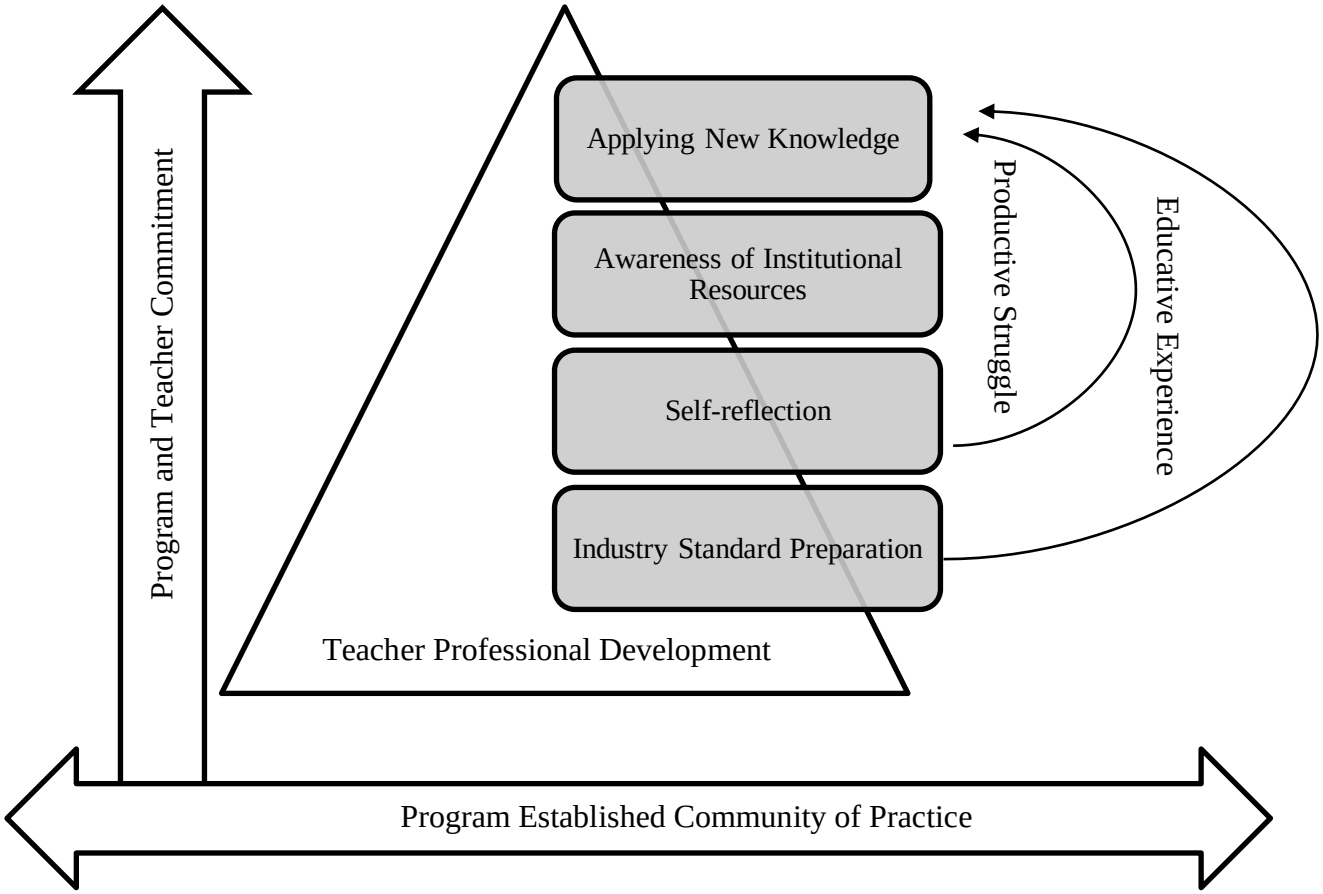
CHAPTER FIVE

Research conducted on K-12 virtual learning environments since initial proliferation in the early 2000s and continuing post-pandemic reveals unstructured approaches to course design, scattershot approaches to instruction, and lack of meaningful professional development centered on virtual practice may result in learning setbacks (An et al., 2021). Continuous inquiry into virtual learning environments has led to quality assurance frameworks, including the QM rubric, as a means to provide structure, guidelines, and sustainability to virtual programs. Although virtual program leaders frequently apply the QM rubric in K-12 virtual course design (Legon, 2015; Quality Matters™, 2022; VLLA, 2022), its significance in K-12 learning environments is indeterminate. This study determined leveraging teachers to serve as QM Course Representatives, could provide a challenging and educative professional learning experience that could enhance instruction and leadership roles, particularly if the primary role of teachers centers on teaching and not course design. Additionally, providing teachers the opportunity to represent program courses for QM reviews could provide extrinsic benefits for both the program and the teachers; the program receives an external seal of quality, and the teacher could feel the professional prestige of participating.

The Ali and Wright (2017) Online Faculty Professional Development Model, which attempts to describe a transformative professional learning experience while applying the QM rubric, was applied as a conceptual framework to this study. The model asserts that the application of the rubric alone cannot transform educator practice and recommends necessary institutional, professional development components that allow for QM application to provide an enduring professional opportunity for faculty and teachers (Ali & Wright, 2017). However, this study provided further refinement of the tiers in the model, finding that the "self-reflection" and "reliance on institutional resources" tiers also include a "productive struggle" described by Trinter and Hughes (2021). The struggle and challenges of participating are integral to engaging teachers throughout an enduring professional development experience. Moreover, the experience calls on teachers to carefully examine their course curriculum and provides an educative professional learning opportunity that could be sustained in instructional practice and teacher leadership

roles (Davis and Krajcik, 2005). Additionally, the Ali and Wright model emphasizes faculty commitment throughout QM implementation (2017); however, this study reveals not only the importance of educator commitment during a quality assurance process but also the importance of educator and program commitment before an initiative even begins. Such a symbiosis can provide the foundation necessary to begin quality assurance initiatives. Moreover, if the right symbiosis and supports exist before and during quality assurance implementation, program and educator commitment can endure long after an initiative concludes, thus reinforcing a community of practice. The graphic below captures the refinement of the Ali and Wright (2017) model and conveys the participant experience before, during, and after their experience as Course Representatives. The graphic suggests a foundational community of practice and ongoing mutual commitment as critical aspects to an enduring experience.

Figure 10: *Modified Ali and Wright (2017) model that includes a foundational established community of practice and ongoing program and teacher commitment.*



Further research could build on the limitations of this study and include the perspectives of novice educators or explore perspectives at different virtual program sites. Additionally, further inquiry could investigate virtual teacher leadership roles and how an individual's professional experiences, including quality assurance initiatives, manifest in virtual leadership priorities. Future research could also apply different methodologies, including quantitative and mixed methods, to explore what factors K-12 teachers perceive as most significant to quality assurance in online course design and online pedagogy.

Purpose and Research Questions

This qualitative case study explored the perspectives of K-12 virtual teachers at a state-led supplemental school who share the common experiences of teaching online courses for a fully virtual program and serving as Course Representatives for organization-initiated QM course reviews (Creswell & Creswell, 2013). The study's findings aim to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. Additionally, the study may provide implications for professional development opportunities for virtual teachers and drive further research on the implementation of quality assurance frameworks to enhance educator practice. Three research questions guided this study and focused on the experiences and perspectives of teachers serving as Course Representatives before, during, and after a QM review including:

RQ 1: What led K-12 virtual teachers to serve as QM Course Representatives?

RQ 2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?

Summary of Case Findings

As a case study, the findings were site-specific and described a phenomenon at a specific, state-led, virtual school offering supplemental middle and high school coursework for students across the state (Yin, 2014). While the state-led virtual school includes a full-time staff divided up into operational and

academic teams to oversee operations and curriculum and instruction, all teachers are hired in a part-time, contract capacity. Course design and content writing are not contract requirements for teachers. Teachers instruct from course sections based on organization-managed master courses, maintained primarily by the full-time Curriculum Staff. Participants voluntarily participated as Course Representatives, or, in the case of Emily, were directed to participate as a part of an existing curriculum support role. The participants were all experienced educators, both in a building setting and online. Furthermore, all participants held contract leadership roles in the organization. The extended leadership role of the teacher participants implied teacher-support structures throughout the organization. All participants also shared philosophies about virtual teaching and learning that aligned with the organization. Cowan et al. (2017) describe a "community of practice" (p. 43) that could support the transfer of new initiatives by involving a select group of individuals to guide others with new learning. The "community of practice" fostered at the case site provided prerequisite shared alignment between teachers and the program that supported the teachers' interest in participating in reviews. Furthermore, the "community of practice" provided opportunities for teachers to apply their new knowledge gained through the Course Representative experience in instruction and leadership roles after the experience. Additionally, the symbiosis at the case site further enforced Siminuch's findings (2022) that structures of support and a culture of quality are foundational to successful quality assurance implementation.

Case-based inquiry reinforced prior research revealing online instructional expertise does not necessarily transfer directly to course design expertise (Crews & Wilkinson, 2015; Schmidt et al., 2013; Stone & Springer, 2019; Trinter & Hughes, 2021). Teachers at the case site experienced novel challenges while supporting course quality initiatives although they were experienced teachers representing familiar courses. Teachers at the case site were not under contractual obligation to author or design master courses, and the case site recognized the divergence between online instruction and online course design and provided a lock-step process with training and templates to prepare teachers for their role as Course Representatives. Additionally, the frequent offers for support mentioned in the training and discussed during interviews demonstrated the case site had structures in place to guide teachers through a course

design and quality assurance process. The significance of the templates and planning was a finding from the Murillo & Jones (2020) study, which suggested templates based on QM standards can support implementation. Additionally, the "community of practice" (Cowan et al., p. 43, 2017) at the case site was further emphasized as participants described how they shared their new learning with other teachers.

Although participants worked through an organization-designed, 13-component training prior to beginning serving as Course Representatives, during interviews, all participants revealed aspects of the experience they could not quite remember. The lapse in recall implied parts of the experience may have fallen into the slog of other professional tasks. Rice & Dawley (2009) described the preference for practical, just-in-time professional development that blended technology skills along with tacit pedagogical skills. It's possible that completing the 13-component training in its entirety before beginning the process, without the ability to implement it into practice right away, might have added to some of the challenges participants identified, including the extensive scope of work, learning curve, rote and redundant aspects, and the lapse of recall for participants.

Furthermore, document analysis and participant descriptions of the experience indicated the case site training focused specifically on the role and expectations of Course Representatives and did not align precisely with instructional expectations or instructional practices. Prior studies, including Bogle et al. (2009), Swan et al. (2012), and Crews & Wilkinson (2015), have aligned the rubric to instructional frameworks including the Community of Inquiry framework (Garrison et al., 2000 as cited in Swan et al., 2014) and Chickering and Gamson's (1987) seven principles for good practice in undergraduate education (Chickering & Gamson, 1987 as cited in Crews and Wilkinson, 2015). While the training did include course objectives as one of its 13 components, the objectives did not precisely align with instructional expectations or other roles participants may have held at the organization. Aligning may have supported some of the challenges and provided a more enduring experience for participants.

Overall, for teachers at the case site, the full Course Representative experience provided an opportunity for teachers to engage in a novel process in a familiar domain compelled teachers to closely examine courses with which there was instructional familiarity. Because the case site distinguished

instructional responsibilities from curriculum and design responsibilities and teachers did not necessarily design or author courses they taught or courses they represented, the entire experience provided what Davis and Krajcik (2005) have described as an educative curriculum experience. Comparable to the educative curriculum experiences Davis and Krajcik (2005) have described, the full Course Representative experience challenged teachers to anticipate how students might interact with the curriculum, as was the case with Barry who added assignment rubrics to provide students a clear criterion for how they would be evaluated or Beth who added in guided notes to support student engagement with instructional materials. Additionally, the full Course Representative experience presented an educative experience that challenged teachers to consider the objectives of a lesson and how it fits into the larger objectives and prescribed standard curriculum of a course (Davis & Krajcik, 2005).

Leading Factors for Participation

Overall, the study found leading factors for teacher participation in quality assurance initiatives are organization-based, participant-based, and mutual-based. Because they were experienced teachers in leadership roles, six of the seven participants shared that the organization's Curriculum Staff "asked" them to participate. Emily was the exception and explained she was directed to participate as an extension of a prior curriculum support role. Although they were "seasoned" teachers and were course leaders or instructional leaders, teachers were under no obligation to serve. Participant-based factors included acquiescence, a small incentive, professional curiosity, or an interest in improving a course. Additionally, there were mutual factors, and all participants held beliefs and engaged in practices that corresponded with the instructional goals and priorities of the organization. The described philosophical alignment between the participants and the institution may have eased the decision to participate as Course Representatives.

The finding of philosophical alignment between the organization and teachers paralleled the Simunich (2022) study that revealed shared institutional goals contributed to the successful implementation of quality assurance. Gregory et al. (2020) also confirmed a supportive culture throughout an organization was a factor for successful quality assurance implementation. The symbiosis between the

teachers and the organization and the pre-existing beliefs about effective virtual learning environments that existed prior to implementing the Course Representative process were factors that may have contributed to all teachers committing to the Course Representative process and completing a successful review. This finding provided a foundation for the Ali and Wright (2017) Online Faculty Professional Development Model. Before the program even extended the opportunity and introduced teachers to the industry standard preparation (Ali & Wright, 2017), the program had a prerequisite "community of practice" (Cowan et al., p. 43, 2017) that fostered the right conditions for the program to rely on teachers to support reviews and for teachers to trust the program would provide adequate training and support to guide them through a successful review.

The Course Representative Experience of Teachers

As participants described the Course Representative experience, they alluded to a professional development opportunity in line with the Ali and Wright (2017) Online Faculty Professional Development Model. While describing the process they followed throughout a QM peer review, they implied the first three tiers: industry standard preparation, self-reflection, and awareness of institutional resources (Ali & Wright, 2017). At the base of the Ali and Wright (2017) pyramid model is industry-standard preparation. While QM does not provide official training for Course Representatives (Quality Matters™, 2022), the subscribing virtual program provides a QM Course Representative Training Course, templates, and a copy of the rubric as the industry-standard preparation for teachers. Training and templates to support teachers complimented the Murillo & Jones (2020) study, which suggested templates can support faculty with QM implementation. Additionally, the Abouelftouh & Alsharidah (2022) study implied the importance of professional development for faculty when implementing QM and quality course design expectations, and the case site accounted for this by providing industry-standard preparation.

Participants detailed a multi-step process and identified challenges and shortcomings with the overall Course Representative process and the QM rubric. The extensive scope of work, learning curve, rote procedures, and points of disagreement about rubric standards were identified as challenges and

critiques. Except for Stephanie, a retired educator, all participants were employed full-time as either classroom teachers or educational support personnel. Additionally, all participants held leadership roles for the organization, and these roles further absorbed their time and professional focus. Although balancing time, task, and focus are challenges for all educators; research has specified the 24/7 nature of the virtual learning environment could impose unique challenges for virtual teachers (Farmer & West, 2017). Additionally, all participants were transitioning, almost immediately between building responsibilities and online work simultaneously. As Barry noted, "(the Course Representative process) was one more thing to add to the day" and the compound of tasks might have contributed to the scope of work and learning curve. The time constraints of implementing the rubric were also a part of the Gregory et al. (2020) findings that identified the time concerns with implementing certain standards.

Additionally, as participants discussed some of the challenges, they affirmed what research has identified as the divergence in skills between teaching online and designing courses online (Archambault et al., 2022; Crews & Wilkinson, 2015; Duncan & Barnett, 2010; Schmidt et al., 2013; Stone & Springer, 2019; Trinter & Hughes, 2021). Document analysis and interviews confirmed the organization did have systems in place to account for the learning curve and necessary support. The QM Course Representative training and support documents detailed a lock-step process that supported teachers; however, the training and templates did not account for course-specific concerns that might have surfaced during a review. The specific content updates required to prepare a course for a successful review contributed to the scope of work and learning curve. Common themes addressing the challenges and variables participants experienced coincided with the Gregory et al. (2020) study. The study found that faculty perceived the QM rubric useful; however, there were time constraints and challenges to implementing certain aspects of the rubric and certain standards were more feasible to fulfill than others (Gregory et al., 2020).

Furthermore, participants did not always agree with the rubric standards and the organization's focus on meeting certain standards. Stephanie and Emily perceived certain aspects of the QM rubric and the organization's priorities to meet specific rubric standards to even be detractors of learner engagement. Stephanie was unsure whether the detailed syllabus, an emphasis on General Standard One, and a means

to fulfill aspects of General Standard Seven focused on learner support, was something students would refer to throughout their learning experience. Emily acknowledged the importance of standards alignment emphasized in General Standards Two, Three, Four, and Five, but she questioned the emphasis Quality Matters™ and the virtual program placed on standards and objectives. Similarly, Mayper's (2022) phenomenological study on faculty perceptions of quality assurance found one concern with applying the rubric was the perceived lack of faculty autonomy. Stephanie's and Emily's perceptions demonstrated concern about their own lack of autonomy in determining how to meet certain standards.

Additionally, the Lee et al. (2020) study identified some inconsistencies and problematic points of the rubric, particularly in the wording of certain expectations. For instance, the words "clearly" or "sufficient" included in the wording of certain QM standards may be open for individual interpretation (Lee et al., 2020). This was echoed in Emily's sentiments that standards are often open for interpretation, particularly, if annotations are not available. Since teachers had to prepare a draft of the course worksheet before they logged into the CRMS system, they may not be privy to full rubric annotations to further clarify how they could meet standards since annotations of how to meet QM standards are not a part of the external facing rubric. The 13-component training revealed teachers only had the external facing rubric and would often have to rely on the guidance of the Curriculum Staff to infer how to meet certain rubric standards. Without annotations ahead of time, teachers and faculty may be left asking the same questions as Emily, "What does that mean?" Similarly, the Murillo and Jones (2020) study also confirmed certain standards were easier to implement than others and this case perhaps held true at the case site where annotations and clarification about the standards was limited without direct guidance from the Curriculum Staff.

As teachers continued through the process, they engaged in self-reflection, a component of the second tier of the Ali and Wright (2017) model. However, self-reflection went beyond "filling in" expectations as teachers often had to discern what aspects of the training were not relevant to their specific course and how to transfer the training into practice. Although reflection might imply a positive process and a means to reflect on prior and new knowledge (Ali & Wright, 2017), reflection often left

teachers in the study feeling uncomfortable. This discomfort resembled what Trinter and Hughes (2021) describe as the "productive struggle" (p. 2). Although "struggle" has less than positive connotations, Trinter & Hughes (2021) explain struggle supports professional engagement as individuals restructure their mental connections and prior knowledge. As they worked on a process focused on curriculum and instructional design, teachers had to put aside past impressions of their course and experience moments of professional discomfort and consider how an outside party would perceive a course. However, as they applied the 13-component training, self-reflected, and worked through challenges, they became cognizant of institutional resources, the third tier of the Ali and Wright (2017) model. The most prominent resources were members of the Curriculum Staff who could answer clarifying questions and provide direct support. Simunich (2022) also confirmed structures of support as essential to successful QM implementation. Additionally, Trinter and Hughes (2021) confirmed a "just in time" approach to addressing challenges and struggles that occur when engaging teachers in tasks that extend beyond their daily instruction responsibilities helps teachers persist through new challenges (Trinter & Hughes, 2021). Participants described the patience and support the organization provided throughout the process which guided teachers through the difficult and confusing points of their experience.

Despite some challenges and critiques, participants overwhelmingly perceived the individual and organizational benefits of teachers serving as Course Representatives. Perceived organizational benefits included a mark of quality from an "outside entity" as Randall described. Stephanie shared a similar perception and appreciated a "QM backing to the courses." Joanna was "glad" the virtual program was investing in QM and perceived its application as something other institutions should consider. A distinguishing mark of quality can potentially allow a virtual program to distinguish itself from the emergency remote experience that quite often frustrated students, teachers, and parents during the global crisis of 2020 (Francom, 2021; Hirsch et al., 2022).

Significance of the Rubric on Professional Development

As participants shared their experience as Course Representatives, they explained they gained deeper insight into the virtual learning environment. Specifically, they were able to consider a familiar

course from an external perspective. Participants also identified how their experience could be applied in instructional practice. Close examination of their course allowed teachers to better understand how their course aligned with state standards and how they could build upon the existing curriculum. The close examination of a familiar curriculum provided an educative learning experience (Davis & Krajcik, 2005) as teachers had to fully consider if the content present in their course was meeting the learning needs of students and consider the improvements necessary to ensure their curriculum aligned with standards and lead students to mastering course objectives. Additionally, Conklin and Barreto (2023) identified how foundational learning objectives were to the learning experience, and allowing teachers to serve as Course Representatives did provide an opportunity for them to deeply explore how their course met prescribed standards.

Furthermore, participants were leaders at the organization and detailed how they were applying their knowledge in leadership roles. As Stephanie described how her prior experience with the QM rubric allowed her to mentor teachers out of her subject area who were participating as Course Representatives, she further extended on Cowan et al.'s "community of practice" (p. 43), or a group of individuals building knowledge through shared practice. Patty also described a similar "community of practice" (p.43) as she explained how she shared the peer review results with her teaching team. The reach of the QM experience extended beyond individual participants as discussions were able to occur among teachers who had not received exposure to the rubric or the Course Representative experience.

As an extension to their discussion about their experience serving as Course Representatives, participants discussed the perceived significance of the rubric on professional practice in general terms. All general standards were referenced directly or indirectly as participants discussed setting up their welcome announcement and syllabus, completing their standards alignment chart, setting up a welcome discussion board, and checking their course for content, tools, and accessibility. As participants discussed the rubric and its broad application for education professionals, they expressed sentiments comparable to Legon's (2015) findings. Legon (2015) proposed measuring the impact of QM standards based on clusters, inferring standards working together provide the best results. Participants implied components

working together to provide alignment, learner interaction, and digital accessibility provided an effective virtual learning environment.

Although participants tended to discuss the rubric holistically, seven Specific Review Standards were mentioned. Randall, Patty, and Beth referred to 3.2 C: *Specific and descriptive criteria are provided for the evaluation of learners' work and assist the instructor in determining the level of achievement of learning objectives and competencies* (Quality Matters K-12 Rubric 5th Edition, 2018), as they detailed adding grading rubrics and detailed grading criteria to the course. Assignment rubrics can serve as internal assessment measures to support incremental learning in the lead-up to external or standardized assessment and support the teaching and learning experience by providing a benchmark of student performance (Kelley, 2024). 3.4 C: *Multiple methods of assessment strategies are included* (Quality Matters K-12 Rubric 5th Edition, 2018) stood out to Emily as she described supporting teachers with the task of providing multiple means of assessment, where needed. Griffith (2023) concluded overuse of quizzes, often a preferred means of assessment in online courses, could negatively impact students' cognitive loads and alternative assessments could enhance a learner's experience.

Additionally, 4.1 C: *The instructional materials contribute to the achievement of the stated course- and module/unit-level learning objectives or competencies, and their relationship with learning objectives or competencies is clearly stated* and 6.1 C: *Course tools support the learning objectives or competencies* (Quality Matters™ K-12 Rubric 5th edition, 2020), came up in discussion as Stephanie described updating instructional materials and broken links. Improvements to the instructional materials and course tools supported the clarity of courses, a significant factor in student experience according to the Conklin and Barreto study (2023). Joanna alluded to 5.3 C: *Learning activities provide opportunities for learner-instructor and learner-learner interaction* (Quality Matters™ K-12 Rubric 5th edition, 2020), as she described the importance of interaction in the virtual classroom. The significance of learner interaction was also confirmed in the Sadaf et al. (2019) and the Conklin and Barreto (2023) studies. Furthermore, Randall and Barry referenced 8.4 C as they discussed pushing in captions for accessibility (Quality Matters™ K-12 Rubric 5th edition, 2020). Research has confirmed accessibility features,

including media captions, contribute to the universal design of a course and provide a more equitable learning experience (Web Accessibility Initiative, 2023). Overall, while the participants described how they carried out their Course Representative role and prepared a course to meet QM standards, they highlighted the opportunity to learn more about standards alignment and the significance of variety, clarity, and accessibility on learner experience, standards perceived as beneficial to learners in the Conklin and Barreto (2023) study.

Furthermore, as participants described some of the challenges with applying specific rubric standards, they echoed Murillo and Jones' (2020) findings that concluded even with a template to follow, certain standards were easier to implement than others. Participants also referenced past inquiry that revealed the blend of a well-designed course and strong instructor presence as a formula to provide the best experience and outcomes for students (Schmidt et al., 2013; Stone & Springer, 2019). Stephanie explained a well-designed course that applies QM standards provides a "good foundation" and "supports daily teaching."

Certain participants, Emily and Stephanie, eventually evolved to serve a support role for other teachers. Emily and Stephanie's guidance did imply the application of new knowledge, the top tier of the Ali and Wright model. However, Ali and Wright (2017) use the term "transformational experience" (p. 331) as a component of their professional development model. The participants did not necessarily allude to a transformational experience, but they did identify a greater conceptual understanding of the virtual learning environment and its application in instructional practice and teacher leadership roles. Notably, participants frequently referenced the rigorous tasks of informing course updates to ensure the course fully aligned with prescribed standards. Beth described having to extend the timeline for the review process to ensure there was enough time to provide necessary content updates. Stephanie explained she had to "really go in" and update an art course since it had not received any full alignment updates since it was first offered. Barry explained he can now boast that he knows his course "standard by standard." The close examination of the virtual course curriculum provided a "productive struggle" (Trinter & Hughes, 2021) that engaged teachers through challenges. Additionally, it fostered an educative experience that

called for teachers to closely examine their curriculum and its efficacy in a fully virtual environment (Davis & Krajcik, 2005).

Implications for Practice

This case study inquiry explored the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives for organization-managed master courses. Findings suggest considerations for programs leveraging teachers to support quality assurance initiatives and suggestions for teachers considering support of program initiatives centered on quality assurance. In summary, the study provides the following implications for programs leveraging teachers to support:

1. Consider the overall program structure prior to implementation.
2. Consider professional development offerings.
3. Break up training and expectations into manageable segments.
4. Establish a "community of practice" (Cowen et al., 2017, p. 43) that provides a tangible means for teachers to apply their new knowledge (Ali & Wright, 2017).
5. Consider aligning with instructional frameworks.

When leveraging teachers to support quality assurance, institutions might consider overall program structure and rapport between educational support staff and teachers. Study findings disclosed several organization-based and individual-based factors that led virtual teachers to voluntarily serve as Course Representatives for organization-managed master courses. In all cases, full-time staff members asked teachers to participate because of their prerequisite experience and leadership roles. Teachers agreed to participate as Course Representatives because they acquiesced, received an incentive, were curious about the process, or perceived a chance to inform course improvements. The institution sought teacher participation, and teachers found a personal incentive to participate. The synergy between the virtual program and the teachers was reinforced as participants shared examples of philosophical alignment with the organization. Pre-existing infrastructure and rapport among the teaching pool are implied prerequisites for initiating quality assurance initiatives that leverage teachers.

Additionally, programs planning to leverage teachers to support quality assurance, specifically in online course design, should consider their program's overall professional development offerings. If there are precise expectations to fulfill quality assurance initiatives, an industry-standard preparation that includes core expectations can help teachers realize success (Ali & Wright, 2017). Furthermore, professional development that provides an educative experience and a chance for teachers to engage with and learn from the curriculum (Davis & Krajcik, 2005). Although participants served as Course Representatives for familiar courses they had taught for multiple terms, their online instructional expertise did not necessarily transfer directly to course design expertise. The case site recognized the divergence between online instruction and online course design and provided training, templates, and a planned, lock-step process. The training itself included some educative elements in that it emphasized close examination of the curriculum and detailed how to use tools to make the online content accessible and how to discern whether the instructional materials, learning activities, and assessments met prescribed standards (Davis & Krajcik, 2005). The prior preparation and professional development did support successful reviews as all courses received QM certification. Additionally, as Barry explained, the process did provide teachers with an opportunity to closely examine how their course matched up to the prescribed standards and objectives of the course, another characteristic of educative curriculum experiences (Davis & Krajcik, 2005).

However, templates and structure do not assuage all challenges. Participants expressed that the extensive scope of work, the learning curve, and the rote nature of certain aspects of the process as difficult aspects of the process. The rote and often confusing nature of the Course Representative experience might be mitigated by breaking the training and experience into manageable segments. While the training was broken down into 13 components, participants explained they worked through the training and reviewed the templates in their entirety before initiating the process. Additionally, since the time required to prepare an older course for review often exceeded the review itself, programs with dated design, content, and technology might consider breaking up Course Representative tasks into two phases: one phase focused on updating a course according to the rubric standards, and a second phase focused on

the Course Representative role through an active and post-review. Furthermore, the entire rubric includes 43 specific standards, all standards the QM organization affirms match up with scholarly research and have a proven record in practice (Quality Matters™, 2022). Given the time to update the rubric and the scope of the rubric alone, perhaps breaking down the rubric training and the Course Representative process into concentrated increments might provide more of a practical "just-in-time" (Rice and Dawley, 2019; Trinter & Hughes, 2021) approach. Furthermore, it's possible professional development about various standards could be broken up into micro-credentialing units and provide opportunities for teachers to have more concentrated learning opportunities focused on applied research and specific rubric themes such as alignment, clarity, interaction, or accessibility (Arnett, 2021; Quality Matters™, 2022).

Participants shared some takeaways that could be applied in their teacher leadership roles and alluded to a "community of practice" (Cowan et al., p. 43, 2017) to implement quality assurance initiatives. In large organizations, such as the case site that provides over 50,000 enrollments per year, it may not be cost-effective or time-effective to train every teacher on the QM rubric or any quality assurance metric. However, providing concentrated experiences for select individuals who can push back their learning and expertise in discussions and leadership roles can expand the reach of quality assurance initiatives and establish a collaborative learning community. Additionally, a "community of practice" (Cowan et al., p. 43, 2017) encourages teachers to apply their new knowledge in leadership roles, and the opportunity to share key takeaways with other teachers may provide a tangible application of new knowledge as described in the Ali and Wright (2017) model. A "community of practice" (Cowan et al., p. 43, 2017) also enhances the ongoing teacher commitment sustained throughout the Ali and Wright (2017) model. Through fostering a "community of practice," teachers are not only committing to the steps required for a QM successful review, but they are also committing to pushing their professional development and new knowledge back into their leadership roles.

As teachers discussed their experiences, they also reflected on their daily routines and instructional practices. They described how organizational requirements for a peer review, such as populating the course syllabus, posting a welcome announcement, and providing a welcome discussion

board, corresponded with typical instructional expectations. Although the Course Representative role was not mandated and teachers were offered the opportunity to serve, programs implementing course quality assurance initiatives might consider how to align the course design frameworks with existing online instructional requirements or requirements of other professional roles. This might allow teachers to better comprehend the fully online learning environment and ensure coalescence between high-quality online instruction and high-quality course design. Additionally, aligning instructional expectations with course design and curriculum initiatives, which require a close examination of the curriculum, might provide an educative experience that enhances a teacher's subject matter expertise and their delivery of the curriculum (Davis & Krajcik, 2005), which in turn can contribute to continuous course and instructional improvements.

Not only do study findings have implications for virtual programs, but there are also professional implications for K-12 virtual teachers. Implications for teacher practice include:

1. Time and focus considerations.
2. Possible opportunities to refresh skills and participate in an educative learning experience.
3. Embrace "productive struggle" and self-reflection in order to engage in a potentially transformational professional development experience.

Participants did reveal the extensive scope of work, learning curve, and rote nature of certain tasks as challenges, so teachers supporting quality assurance may have to consider time and focus factors prior to participating in program-based quality assurance initiatives (Farmer & West, 2017). However, if teachers can commit the time and focus, they may experience an enduring professional development opportunity (Ali & Wright, 2017) that might refresh their skills and transfer into instructional practice and leadership roles. The experience might provide a more in-depth understanding of the online learning environment (Adair & Shattuck, 2015; Ali & Wright, 2017; Baldwin, 2019; Shattuck, 2015). As Dishon (2021) revealed, the virtual environment will always be dynamic, and successful teachers will need to constantly refresh their technology and pedagogy skills and experience. The close engagement with the

course curriculum required to execute a successful review could provide an educative learning experience where teachers can enhance their subject matter knowledge as they consider how the course supports learning and what potential curriculum gaps might exist in a course (Davis & Krajcik, 2015). Not only can a multi-step quality assurance process with a tangible outcome such as the Course Representative experience improve the understanding of online instruction, but it can also enhance the understanding of how a subject is taught as demonstrated in the participants improved understanding of the prescribed curriculum standards for their respective courses.

Additionally, refreshing skills might also involve deliberate reflection, reinforced through a "productive struggle." While the 13-component training did provide a forum for support, pre-designed opportunities to discuss the experience in a reflective way were not readily available. As they felt the pangs of a novel challenge, participants had to consider their assumptions about their course and online learning and lean into the support of the program to support them through a novel process. An implication for teachers is to incorporate opportunities for reflection when participating in novel challenges and engaging in productive struggles. Working through a productive struggle, overcoming challenges, and engaging in self-reflection throughout a course quality assurance process may lead to a more transformative professional development experience overall, as Ali and Wright describe (2017). Even if reflection is not a program requirement, teachers supporting quality assurance might voluntarily self-reflect as a part of their experience, so they can engage in a more enduring professional opportunity that can push back into virtual practice.

Limitations

There were several limitations to the study including the demographics of the participants, the setting of a single case site, the limited vantage point of the participants, and the emphasis of applying one quality assurance rubric. All participants were experienced teachers, with at least fifteen years of experience in education and seven or more years in virtual education. Additionally, they held leadership roles in the organization. Joanna specifically shared, "If you take a new teacher who has not taught and

who would go through this rubric, it is very helpful to become a good online instructor." The participant sample did not include novice teachers, and this was a limitation to the study findings.

Furthermore, although participants included high-school teachers with some middle school expertise in Career and Technical Education, Math, English Language Arts, Science, and World Language, the sample did not include teachers from every subject area or grade level at the organization. It's possible teachers from other subject areas might share a different experience or perspective. Perhaps certain subject specialties may have required state standards that are easy to interpret and implement in a fully online course compared to other subject areas. Additionally, different subject areas might incorporate more technology by nature of the curriculum. Since the Course Representative experience requires teachers to navigate documents, the CRMS, and an LMS, it is possible teachers representing subject areas with less technology application may share a different perspective. Additionally, participants working with younger students might have different instruction and course design considerations, and this may also impact their perspective and experience.

Another limitation is the research took place at a single case site. Findings may provide some analytical generalizations (Brinkman & Kvale, 2014; Yin, 2014) and provide implications for practice; however, the descriptions, perspectives, and interpretations are site-specific and cannot be applied to a broad population. The site was a K-12 supplemental school, and teachers were all part-time, contract-based faculty, who instructed students using a copy of an organization-managed master course. Teachers were also asked to represent courses to support organizational initiatives. Perspectives and experiences may have differed if teachers were representing a course they designed and had decided to participate as Course Representatives independently.

Additionally, the case study focused on the vantage point of single group of professionals: teachers who served as Course Representative. Although document analysis was applied to triangulate findings, the perspective of additional program stakeholders, including full-time leadership, curriculum, and instruction staff, was not incorporated into the research protocol. Moreover, the study did not account for the direct student perspective. While teachers did discuss the impact of high-quality courses on their

practice and how their professional routines drive student learning, the findings presented only the teacher perspective, and student performance data or student perspective was not included in the study findings.

Furthermore, the case study focused on a virtual program that selectively applies the Quality Matters™ rubric for course quality assurance. Although QM is one of the most prominent quality assurance frameworks for virtual learning, it is not the only organization focused on virtual learning quality (VLLA, 2024). Other organizations such as the Digital Learning Collaborative (Digital Learning Collaborative, 2024), Center on Inclusive Technology & Education (CITES) (CITES, 2024), and the Online Learning Consortium (OLC) (OLC, 2024), also conduct research and provide guidance on quality practice for virtual programs. A limitation to the study is the focus on the application of a single rubric. It's possible, other quality assurance frameworks might have yielded comparable experiences. Additionally, several participants referenced other professional development opportunities the organization provides, and as Joanna noted, it is possible a combination of professional development opportunities might support the overall focus on quality.

Recommendations for Future Research

Study findings and limitations provide recommendations for future research. Because the case study was exploratory in nature, part of the rationale of its design was to guide additional inquiry (Yin, 2014). Further research based on findings may apply different methodologies to examine what compels teachers to participate in quality assurance initiatives, how they describe their experiences, and what about their experiences they perceive as significant to their professional practice. For instance, since multiple programs in the VLLA are applying quality assurance frameworks, including the QM rubric (VLLA, 2022), a multi-case analysis could compare the impact of QM implementation on instructional and leadership practice across programs (Yin, 2014).

Additionally, to build on findings, a quantitative or mixed-methods approach could integrate common themes surrounding the experiences and perspectives of teachers applying the QM rubric into a survey design. Other suggestions for quantitative or mixed-method methodologies could incorporate

student perspectives or performance data into the protocol. Because the sample involved K-12 students, considerations for an IRB protocol that would include student data would need to be considered.

Furthermore, since the study was limited to experienced teachers and some participants suggested the Course Representative experience would be beneficial for novice virtual teachers, studies focused on the impact of Course Representative experience on new teachers may expand on findings. Research could also correlate the perceived impact of the rubric on instructional practice with the grade level, subject, and experience level of teachers. Research examining whether experience, grade, and subject area impact perspective might account for some of the limitations based on this study's respective participant sample.

Not only was the study limited to one case site, but the study was also limited to experiences and perspectives about one specific course design framework. Since other frameworks and organizations do exist to guide online quality, additional research that compares the application of various course design frameworks among virtual programs might inform additional options for building teacher capacity and enriching their understanding of the fully online virtual learning environment.

As participants described their experiences, they identified high professional standards and described effective online practices that diverged from classroom practice. While not directly related to QM, these findings could lead to future research focused on what teachers perceive as effective virtual instruction practice and effective virtual leadership processes and routines. Additionally, since participants shared a philosophical alignment with the virtual program, and this contributed to their participation as Course Representatives, inquiry focused on the culture of virtual schools and how they support students, teachers, and a culture of quality may provide more insights into K-12 virtual education in general.

Furthermore, while there has been a steady stream of research focused on K-12 virtual learning environments since the initial insurgence of programs at the start of the century, longitudinal research or systemic reviews centered on how programs and practices have evolved alongside technology advancement, the technology exposure of students, and the virtual learning experiences of ERT, might

provide additional knowledge and dialogue about how to maintain relevant and current virtual learning practices. All participants were experienced teachers and many shared routines as Joanna mentioned, "that work" and "they are sticking to." While routine can provide alignment, clarity, and consistency, all concepts emphasized in the QM rubric (Quality Matters™ K-12 Rubric Fifth Edition, 2018), these attributes may not always keep tempo with emerging technology. "Currency" is specifically stated in QM Required Specific Review Standard 4.5 C rubric (Quality Matters™ K-12 Rubric Fifth Edition, 2018), and it may be worth examining how programs strive for currency and relevancy in a world where machine learning is no longer a far-fetched plot driver of summer popcorn films.

Summary

The opening chapter provided a rationale for the research. K-12 virtual teachers at state-led, supplemental virtual schools may support quality assurance initiatives and serve as Course Representatives for official QM reviews; however, it was uncertain whether the time and focus investment provided ancillary benefits beyond an official seal of quality. This inquiry explored the experience and perspectives of K-12 virtual teachers who served as Course Representatives including what led them to participate and what they perceived as significant to professional practice.

The second chapter surveyed the early history of K-12 virtual learning and described how emerging research has supported best practices. Research has also led to established frameworks focused on instructional quality and course design quality, including the QM rubric. Chapter Two examined existing literature on the QM rubric, but most of these studies were conducted in higher education settings. This research aimed to extend inquiry of quality assurance initiatives in K-12 learning environments.

The third chapter described the applied methodology. A case study approach integrated multiple data sources including document analysis and participant interviews. A five-phase data analysis process (Bingham, 2022) guided inductive themes and deductive findings corresponding with the Ali and Wright (2017) Online Faculty Professional Development model and the QM K-12 rubric.

The fourth chapter discussed common themes derived from the data that addressed the research questions. Organization-based, participant-based, and mutual factors contributed to teachers participating as Course Representatives. Teachers perceived some challenges and critiques as they underwent the Course Representative process and applied the rubric. However, they also perceived benefits for subscribing programs and individual teachers that lined up with the Ali and Wright (2017) model. Specifically, they implied they could apply their new knowledge (Ali & Wright, 2017) in instructional practice and leadership practice, and the overall experience provided a more enriched understanding of the virtual learning environment.

The fifth and final chapter recalled prior research that corresponded with study findings including prior QM impact studies and studies focused on professional development for K-12 virtual teachers. The discussion also describes implications for practice, specifically for virtual program leaders and teachers. Additionally, further inquiry that applies different methodologies and builds on themes and limitations could also extend the research.

Conclusion

In closing, through this iterative process, I provide a nominal contribution to research centered on K-12 virtual learning. First, the study reinforces the significance of quality assurance and its impact in virtual settings. To date, prior research in virtual learning has either emphasized higher education settings or explored emerging best practices for K-12 environments. However, K-12 programs have been around for the duration of the 21st century, and examining how they sustain through evolving quality and practice supports educational research at large. Current research on K-12 virtual programs considers the technological advancements and implementation of practices centered around students born into a multimedia landscape that has achieved rainforest density since K-12 programs were initiated almost three decades ago. As scattershot online practices of the pandemic revealed, quality assurance is paramount for durable K-12 virtual programs (Francom, 2021; Hirsch et al., 2022). Teachers are at the frontline of a high-quality experience. Engaging teachers in quality assurance initiatives enacts a close

connection between a well-designed course and an intentional teacher and reinforces a “community of practice” (Cowan et al., 2017; Schmidt et al., 2013; Stone & Springer, 2019).

Although I cannot conclude that QM is the only means to ensure quality and engage virtual educators in program enhancements, the forethought and intentionality of implementing quality assurance initiatives, such as supporting teachers serving as Course Representatives, did result in successful reviews for a virtual program and provide takeaways that enriched educator practice. Quality assurance that engages teachers who are at the forefront of the learner experience may continue to bind established programs and faculty. It can also continue to enforce commitment and engagement and improve program outcomes overall. As Barry explained, perhaps “the end does justify the means.”

REFERENCES

Abouelftouh, M. A., & Majed, A. A. (2022). Evaluating the Design of Mathematics Courses Available on the Blackboard Platform at Prince Sattam bin Abdulaziz University According to Quality Matters Standards. *Eurasia Journal of Mathematics, Science and Technology Education, 18*(4)https://doi.org/10.29333/ejmste/11924

Adair, D. (2017). Developing an international pool of certified quality reviewers. *American Journal of Distance Education, 31*(3), 154-159. https://www.tandfonline.com/doi/full/10.1080/08923647.2017.1337875

Adair, D. & Shattuck, K. (2015) Quality Matters™: An Educational input in an ongoing design- based research project, *American Journal of Distance Education. 29*(3), 159-165. 10.1080/08923647.2015.1057094

Al-Harthi, A. S. A., Campbell, C., & Karimi, A. (2018). Teachers' cloud-based learning designs: The development of a guiding rubric using the TPACK framework. *Computers in the Schools, 35*(2), 134-151. https://doi.org/10.1080/07380569.2018.1463033

Ali, R. & Wright, J. (2017). Examining the QM process: Making the case for a transformative professional development model. *International Journal on E-learning, 16*(4), 329-347. https://digitalcommons.kennesaw.edu/facpubs/4150

Ames, K., Harris, L. R., Dargusch, J., & Bloomfield, C. (2021). “So, you can make it fast or make it up:” K-12 teachers’ perspectives on technology’s affordances and constraints when supporting distance education learning. *Australian Educational Researcher*, *48*(2), 359–376. https://doi.org/10.1007/s13384-020-00395-8

An, Y., Kaplan-Rakowski, R., Yang, J., Conan, J., Kinard, W., & Daughrity, L. (2021). Examining K-12 teachers’ feelings, experiences, and perspectives regarding online teaching during the early stage of the COVID-19 Pandemic. *Educational Technology Research and Development*, *69*(5), 2589–2613. https://doi.org/10.1007/s11423-021-10008-5

An H, Mongillo G, Sung W, Fuentes D. (2022). Factors affecting virtual learning during the COVID-19

Pandemic: The lived experiences of parents, teachers, and administrators in U.S. high-needs K-12 schools. *Journal of Virtual learning Research. 8*(2), 203-234. https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=eric&AN=EJ1359227&authtype=shib&site=ehost-live&scope=site

Anderson, E. A. (2019). K-12 online student engagement: New construct or extension to existing construct? In T. L. Heafner, R. Harsthone, & R. Thripp. (Eds)., *Emerging Practices and Methods for K-12 Online and Blended Learning.* IGI Global. http://dx.doi.org/10.4018/978-1-5225-8009-6

Archambault, L. (2010). Identifying and addressing teaching challenges in K-12 online environments. *Distance Learning*, *7*(2), 13-17. https://www.proquest.com/scholarly-journals/identifying-addressing-teaching-challenges-k-12/docview/853890108/se-2

Archambault, L., & Kennedy, K. (2014). Teacher preparation of K-12 online and blended Learning. In R. E. Ferdig and K. Kennedy (Eds)., *Handbook of Research on K-12 Online and Blended Learning.* ETC press. https://www.researchgate.net/publication/324571471_Handbook_of_research_on_K-12_online_and_blended_learning_2nd_ed

Archambault, L., & Larson, J. (2015). Pioneering the digital age of instruction: Learning from and about K-12 online teachers. *Journal of Virtual learning Research*, *1*(1), 49-83. https://files.eric.ed.gov/fulltext/EJ1148866.pdf

Archambault, L., Leary, H., & Rice, K. (2022). Pillars of online pedagogy: A framework for teaching in virtual learning environments. *Educational Psychologist*, *57*(3), 178-191. https://doi.org/10.1080/00461520.2022.2051513

Arnesen, K. T., Hveem, J., Short, C. R., West, R. E., & Barbour, M. K. (2019). K-12 online learning journal articles: Trends from two decades of scholarship. *Distance Education*, *40*(1), 32-53. https://doi.org/10.1080/01587919.2018.1553566

Arnett, T. (2021). Breaking the mold: How a global pandemic unlocks innovation in K-

12 instruction. *Clayton Christensen Institute for Disruptive Innovation.* https://www.christenseninstitute.org/publications/online-learning-survey/

Aurora Institute. (2023). *Aurora Institute: A new dawn for every learner*. https://aurora-institute.org/

Bai, H. (2019). Pedagogical practices of mobile learning in K-12 and higher education settings. *TechTrends, 63*(5), 611-620. https://doi.org/10.1007/s11528-019-00419-w

Baker, I., & Fitzpatrick, D. (2022). Student Experiences in Pre-COVID Virtual Internships: Integration, Barriers, Motivation Challenges, Supportive Supervisors, and Intern Growth. *American Journal of Distance Education, 36*(2), 90-102. https://doi.org/10.1080/08923647.2022.2034399

Baldwin, S. (2019) Assimilation in online course design. *American Journal of Distance Education, 33* (3). 195-211. 10.1080/08923647.2019.1610304

Barbour, M. K., & Reeves, T. C. (2009). The reality of virtual Schools: A review of the literature. *Computers & Education*, *52*(2): 402–416.

Barbour, M. K. (2007). Who's researching virtual schools: A case for instructional technologists. *Distance Learning (Greenwich, Conn.)*, *4*(1), 7–12. https://www.proquest.com/openview/7c659375703c076a25e3f6c114d21776/1?pq-origsite=gscholar&cbl=29704

Barbour, M.K. (2022). Where do they go? An investigation of K-12 online learners process for obtaining support. *TechTrends 66.* 351–365. https://doi.org/10.1007/s11528-022-00698-

Barbour, M. K. (2011). The promise and the reality: Exploring virtual schooling in rural jurisdictions. *Education in Rural Australia*, *21*(1), 1–20. https://core.ac.uk/download/pdf/231035933.pdf

Barbour, M. K. (2018). Examining online research in higher education: What can we replicate in K-12? *Michigan Virtual University*. https://mvlri.org/research/publications/examining-online-research-in-highereducation-what-can-we-replicate-in-k-12/

Barbour, M. K., Morrison, J., & Adelstein, D. (2014). The forgotten teachers in K-12 online learning:

Examining the perceptions of teachers who develop K-12 online courses. *International Journal of Online Pedagogy and Course Design*, *4*(3), 18-33. https://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1203&context=ced_fac

Barczyk, C., Hixon, E., Buckenmeyer, J., & Ralston-Berg, P. (2017). The effect of age and employment on students' perceptions of online course quality. *American Journal of Distance Education, 31*(3), 173-184, https://doi.org/10.1080/08923647.2017.1316151

Barton, K. C. (2015) Elicitation techniques: Getting people to talk about ideas they don't usually talk about. *Theory & Research in Social Education*. *43*:2, 179-205,10.1080/00933104.2015.1034392

Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. The Qualitative Report, 13(4), 544-559. https://doi.org/10.46743/2160-3715/2008.1573

Beetham, H., & Sharpe, R. (Eds.). (2019). *Rethinking pedagogy for a digital age: Principles and practices of design* (3rd ed.). Routledge. https://doi.org/10.4324/9781351252805

Bergdahl, N. (2022). Engagement and disengagement in virtual learning. *Computers in Education, 188,*104561 https://doi.org/10.1016/j.compedu.2022.104561.

Bergdahl, N. & Bond, M. (2022). Exploring (dis-)engagement in K-12 online and blended learning. *Journal of Virtual Learning Research*, *8*(3), 283-287. https://www.learntechlib.org/primary/p/221620/.

Berge, Z. L., & Clark, T. A. (2005). *Virtual schools: Planning for success*. Teachers College Press. https://www.researchgate.net/publication/266866679

Bickle, M., & Rucker, R. (2021). Stumbling made me a better online instructor: 13 tips toward quality i improvement. *Distance Learning, 18*(3), 14-22. https://www.proquest.com/scholarly-journals/stumbling-made-me-better-online-instructor-13/docview/2610108386/se-2

Bingham, A. J. (2023). From data management to actionable findings: A five-phase process of qualitative data analysis. *International Journal of Qualitative Methods, 22.* https://doi.org/10.1177/16094069231183620

Blair, E. (2015). A reflexive exploration of two qualitative data coding techniques. *Journal of Methods and Measurement in the Social Sciences, 6*(1), 14-29. https://doi.org/10.2458/v6i1.18772

Blomeyer, R. L., & Cavanaugh, C. (2007). What works in K-12 virtual learning. *International Society for Technology in Education.*

Bolliger, D. U., & Martin, F. (2018). Instructor and student perceptions of online student engagement strategies. *Distance Education*, *39*(4), 568-583. https://doi.org/10.1080/01587919.2018.1520041

Bogle, L., Cook, V., Day, S., Swan., K. (2009). Blended program development: Applying the Quality Matters and Community of Inquiry frameworks to ensure high-quality design and implementation. *Journal of the Research Center of Educational Technology, (5),*2. http://www.rcetj.org/

Borup, J. (2016). Teacher perceptions of learner-learner engagement at a cyber high school. *International Review of Research in Open and Distance Learning*, *17*(3), 231-250. https://doi.org/10.19173/irrodl.v17i3.2361

Borup, J., Graham, C. R., & Drysdale, J. S. (2014). The nature of teacher engagement an online high school. *British Journal of Educational Technology*, *45*(5), 793–806. https://doi.org/10.1111/bjet.12089

Borup, J., Graham, C. R., West, R. E., Archambault, L., & Spring, K. J. (2020). Academic communities of engagement: An expansive lens for examining support structures in blended and virtual learning. *Educational Technology Research and Development*, *68*(2), 807-832. https://doi.org/10.1007/s11423-020-09744-x

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), https://link.gale.com/apps/doc/A218450363/AONE?u=char69915&sid=bookmark-AONE&xid=e6b8d5ff

Brinkman, S. & Kvale, S. (2014). *Interviews: Learning the craft of qualitative research interviews.* 3rd edition. Sage.

Bütün, M. (2021). Mathematics teachers' views on distance education and their beliefs about integrating

computer technology in mathematics courses. *Journal of Pedagogical Research, 5(*2), 88–102. https://doi.org/10.33902/JPR.2021269394

Cassell, C., Radcliffe, L., & Malik, F. (2020). Participant reflexivity in organizational research design. *Organizational Research Methods, 23*(4), 750-773. https://doi.org/10.1177/1094428119842640

Cavanaugh, Catherine. (2001). The effectiveness of interactive distance education technologies in K-12 learning: A Meta-Analysis. *International Journal of Educational Telecommunications, 7*(1), 73-88. https://go.gale.com/ps/i.do?p=AONE&u=char69915&id=GALE%7CA75959118&v=2.1&it=r

Cavanaugh, C., Barbour, M. & Clark, T. (2009). Research and practice in K-12 online learning: A review of open access literature. *International Review of Research in Open and Distributed Learning, 10*(1), 1-20. https://doi.org/10.19173/irrodl.v10i1.607

Cavanaugh, C, Gillan, K.J., Kromrey, J., Hess M., Blomeyer, R. (2004). The effects of distance education on K-12 student outcomes: A meta-analysis. *Learning Point Associates.* http://www.ncrel.org/tech/distance/k12distance.pdf

Center for Applied Special Technology (CAST). (2011). Universal design for learning guidelines version 2.0.

Chickering, A. W. & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *American Association for Higher Education. 39*(7), 3-7. https://www.aahea.org/index.php/aahea-bulletin

Chickering, A. W. & Gamson, Z.F. (1999). Development and adaptations of the seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning, 1999*(80), 1-103. https://onlinelibrary.wiley.com/doi/epdf/10.1002/tl.8006

Center on Inclusive Technology and Education Systems (2024). Retrieved September 24, 2024. https://cites.cast.org/more/virtual-learning

Conklin, S. & Barreto, D. (2023). Student Perceptions of Quality Matters Standards on Engagement and Learning. *American Journal of Distance Education*, 1–15.

https://doi.org/10.1080/08923647.2023.2242734

Conklin, S., Morgan, Z., Easow, G., Hanson, E. (2020). Impact of QM professional development on course design and student evaluations. *Journal of Educators Online, 17*(2), 13. https://eric.ed.gov/?id=EJ1268924

Cowan, J., Richter, S., Miller, T., Rhode, J., Click, A., & Underwood, J. (2017). Building a sustainable Quality Matters ™ community of practice through social network analysis. *The American Journal of Distance Education, 31*(3), 160-172. https://doi.org/10.1080/08923647.2017.1316154

Creswell, J. W. & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory Into Practice*. *39*:3, 124-130. 10.1207/s15430421tip3903_2

Creswell, J. W., & Creswell, J. W. (2013). Qualitative inquiry & research design : choosing among five a approaches (3rd ed.). SAGE Publications.

Crews, T. B., & Wilkinson, K. (2015). Online quality course design vs. quality teaching: Aligning Quality Matters™ Standards to principles for good teaching. *The Journal of Research in Business Education, 57*(1), 47-64. https://www.proquest.com/docview/1862879787

Crouse, T. & Rice, M. (2018). Learning to serve students with disabilities online: Teachers' perspectives. *Journal of Virtual learning Research, 4*(2), 123-145. https://files.eric.ed.gov/fulltext/EJ1184994.pdf

Curtis, H., & Werth, L. (2015). Fostering Student Success and Engagement in a K-12 Online School. *Journal of Virtual learning Research, 1*(1), 163–190 https://www.learntechlib.org/j/JOLR

Cyrs, T. E. (1997). Competence in teaching at a distance. *New Directions for Teaching and Learning,* (*7),* 15–18. https://doi.org/10.1002/tl.7102

Czerniewicz, L., Agherdien, N., Badenhorst, J., Belluigi, D., Chambers, T., Chili, M., . . . Wissing, G. (2020). A wake-up call: Equity, inequality and Covid-19 emergency remote teaching and learning. *Postdigital Science and Education, 2*(3), 946-967. https://doi.org/10.1007/s42438-020-00187-4

Davis, A. (2018). An evaluation of an online master course design model at a North Carolina Community College, *ProQuest Dissertations & Theses Global.*

https://www.proquest.com/dissertations-theses/evaluation-online-master-course-design-model-at/docview/2086406273/se-2

Davis, E. A., & Krajcik, J. S. (2005). Designing educative curriculum materials to promote teacher learning. *Educational Researcher, 34*(3), 3–14. https://doi.org/10.3102/0013189x034003003

Davis, N. E., & Roblyer, M. (2005). Preparing teachers for the "Schools that technology built:" Evaluation of a program to train teachers for virtual schooling. *Journal of Research on Technology in Education, 37*(4), 399–409 https://doi.org/10.1080/15391523.2005.10782445

Davis, N., Roblyer, M., Charania, A., Ferdig, R., Harms, C., Compton, L., & Cho, M. (2007). Illustrating the "virtual" in virtual schooling: Challenges and strategies for creating real tools to prepare online teachers. *The Internet and Higher Education, 10*(1), 27–39. https://doi.org/10.1016/j.iheduc.2006.11.001

Dawson, K. & Dana, N. F. (2014). Professional development for K-12 online teachers. In R.E. Ferdig and K. Kennedy (Eds)., *Handbook of Research on K-12 Online and Blended Learning.* ETC press.

Deng, W., Lei, W., Guo, X., Li, X., Ge, W., & Hu, W. (2022). Effects of regulatory focus on virtual learning engagement of high school students: The mediating role of self-efficacy and academic emotions. *Journal of Computer Assisted Learning*, *38*(3), 707–718. https://eric.ed.gov/default.aspx?q=descriptor%3A%22Prevention%22&ff1=subPrevention&ff2=eduEarly+Childhood+Education&ff3=eduHigh+Schools&id=EJ1333175

Desimone, L. M. (2011) A Primer on Effective Professional Development. *Phi Delta Kappan, 92*(6), 68–71. https://doi.org/10.1177/003172171109200616

Digital Learning Collaborative (DLC). (n.d.). Retrieved February 1, 2023. https://www.digitallearningcollab.com/

Diliberti, R. K. (2018). Assessing quality: Teachers' perceptions of state virtual schools courses. *ProQuest Dissertations & Theses Global.* https://www.proquest.com/dissertations-theses/assessing-quality-teachers-perceptions-state/docview/2091410091/se-2

Dindar, M., Suorsa, A., Hermes, J., Karppinen, P., & Näykki, P. (2021). Comparing technology

acceptance of K-12 teachers with and without prior experience of Learning Management Systems: A COVID-19 pandemic study. *Journal of Computer Assisted Learning*, *37*(6), 1553–1565.

Dikkers, A. G. (2015) The intersection of online and face-to-face teaching: Implications for virtual schoolteacher practice and professional development. *Journal of Research on Technology in Education, 47*(3), 139-156. 10.1080/02773813.2015.1038439

Dipietro, M. (2010). Virtual school pedagogy: The instructional practices of K-12 virtual school teachers. *Journal of Educational Computing Research, 42*(3), 327-354. https://doi.org/10.2190/EC.42.3.e

Duncan, H. E., & Barnett, J. (2010). Experiencing online pedagogy: a Canadian case study. *Teaching education, 21*(3), 247-262. https://doi.org/10.1080/10476210903480340

Dishon, G. (2022). What kind of revolution? Thinking and rethinking educational technologies in the time of COVID-19. *Journal of the Learning Sciences*, 31(3), 458–476.

Douglas, E.P. & Jordan, S., Lande, M, & Bumbaco, A. (2015). Artifact elicitation as a method of qualitative inquiry in engineering education. ASEE Annual Conference and Exposition, Conference Proceedings. 122.

Eadens, D. W., Maddock, D., Thornburg, A. W., & Abernathy, D. F. (2022). K-12 Teacher perspectives on the pandemic pivot to online teaching and learning. *Journal of Pedagogical Research*, *6(*1), 131–151. https://files.eric.ed.gov/fulltext/EJ1338872.pdf

Ellis, M. L., Lu, Y.-H., & Fine-Cole, B. (2021). Digital learning for North Carolina educational leaders. *TechTrends: Linking Research & Practice to Improve Learning*, *65*(5), 696–712. https://doi.org/10.1007/s11528-021-00649-x

Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? *Educational Technology Research and Development, 53*(4), 25-39. https://doi.org/10.1007/BF02504683

Farmer, T. S. & West, R. (2017). Exploring the concerns of online educators. *Journal of Virtual learning and Research, 5*(1), 97-118. https://files.eric.ed.gov/fulltext/EJ1208818.pdf

Ferdig, R. E. (2018). Handbook of Research on K-12 Online and Blended Learning (Version 1).

Carnegie Mellon University. https://doi.org/10.1184/R1/6686810.v1

Ferdig, R. Cavanaugh, C., DiPietro, M., Black, E. & Dawson, K. (2009). Virtual schooling standards and best practices for teacher education. *Journal of Technology and Teacher Education, 17*(4), 479-503. *Society for Information Technology & Teacher Education.* from https://www.learntechlib.org/primary/p/30481/

Finley, D. L. (2015). Using Quality Matters (QM) to improve all courses. In Morgan, R.K., Olivares, K.T., Becker J., & Wolter, R. (Eds.), *Quick Hits for Adjunct Faculty and Lecturers: Successful Strategies from Award-Winning Teachers*. (pp. 57–60). Indiana University Press. http://www.jstor.org/stable/j.ctt17rw5ft.42

Flynn, P. (2020). Design-ED: A pedagogical toolkit to support K-12 teachers' emergency transition to remote online education. *Information and Learning Science*, *121*(5/6), 331-339. https://doi.org/10.1108/ILS-04-2020-0103

Francom, G.M., Lee, S.J. & Pinkney, H. (2021). Technologies, Challenges and Needs of K-12 Teachers in the Transition to Distance Learning during the COVID-19 Pandemic. TechTrends 65, 589–601. https://doi.org/10.1007/s11528-021-00625-5

Friedrich, J. C., & Perrotta, K. A. (2022). Head above water: A study of K-12 teachers' perspectives on emergency remote learning during the COVID-19 Pandemic. *Curriculum and Teaching Dialogue*, *24*(1–2), 191–209. https://eric.ed.gov/?id=EJ1357188

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, *2*(2), 87–105. https://doi.org/10.1016/S1096-7516(00)00016-6

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the Community of Inquiry Framework: A retrospective. *The Internet and Higher Education*, *13*(1), 5–9. https://doi.org/10.1016/j.iheduc.2009.10.003

Giacumo, L. A. (2020). Creating accessible and inclusive virtual learning: Moving beyond compliance and broadening the discussion. *Quarterly Review of Distance Education*, *21*(2), 1–82. https://eric.ed.gov/?id=EJ1288511

Glaser, B. G. (2004). “Naturalist inquiry” and Grounded theory. Forum. *Qualitative Social Research, 5*(1).

Gomez, F.C., Trespalacios, J., Hsu, YC. (2022). Exploring teachers’ technology integration self-efficacy through the 2017 ISTE Standards. *TechTrends*. *66*, 159–171. https://doi.org/10.1007/s11528-021-00639-z

Greer, D., Rice, M., & Dynkman, B. (2014). Reviewing a decade (2004-2014) of published, peer-reviewed research on virtual learning and students with disabilities. In R.E. Fording and K. Kennedy (Eds*)., Handbook of Research on K-12 Online and Blended Learning.* ETC press.

Gregory, R. L., Rockinson-Szapkiw, A. J., & Cook, V. S. (2020). Community college faculty perceptions of the Quality Matters™ Rubric. *Virtual learning*, *24*(2), 128–141. https://doi.org/10.24059/olj.v24i2.2052

Gyabak, K., Ottenbreit-Leftwich, A. & Ray, J. (2015). Teachers using designerly thinking in K- 12 online course design. *Journal of Virtual learning Research*, *1*, 253-274. http://www.editlib.org

Griffith, J. (2023). Does removing quizzes impact student performance in an online course? *OJDLA, 26* (2). https://ojdla.com/articles/does-removing-quizzes-impact-student-performance-in-an-online-course

Harkness, S. J. (2015) How a Historically Black College University (HBCU) established a sustainable virtual learning program in partnership with Quality Matters. *American Journal of Distance Education*, *29*(3), 198-209, 10.1080/08923647.2015.1057440.

Harvey, D., Greer, D., Basham, J., & Hu, B. (2014). From the Student Perspective: Experiences of Middle and High School Students in Virtual learning. *The American Journal of Distance Education*, *28*(1), 14–26. https://doi.org/10.1080/08923647.2014.868739

Hasler W.L., Barbour, M. K., & Menchaca, M. P. (2014). The nature of online charter schools: Evolution and emerging concerns. *Journal of Educational Technology & Society*, 1 7(4), 379–389. Retrieved from https://www.jstor.org/journal/jeductechsoci

Hernandez, A. M., Daoud, A., Woodcock, A., & Landin, K. (2021). Examining Field Experiences of Teacher Candidates During COVID-19: Systemic Inequities Unveiled for Underserved English Learners in K-12 Grades. *Journal of Hispanic higher education*, 153819272110577. https://doi.org/10.1177/15381927211057764

Hirsch, S. E., Bruhn, A. L., McDaniel, S., & Mathews, H. M. (2022). A survey of educators serving students with emotional and behavioral disorders during the COVID-19 pandemic. *Behavioral Disorders*, *47*(2), 95–107. https://doi.org/10.1177/01987429211016780

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and virtual learning. *EDUCAUSE Review.* https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning?s=03.

Hodges, C.B., Barbour, M., Ferdig, R. (2022). A 2025 vision for building access for K-12 online and blended learning in pre-service teacher education. *Journal of Technology and Teacher Education, 30*(2), 201-216. http://www.learntechlib.org/p/221153/

Hollingshead, A., Malone, K. & Kitchel, A. (2022). (Dis-)engagement in Learning as a Reality of COVID-19 Pandemic: Lessons Learned. Journal of Virtual learning Research, *8*(3), 343-368.

Hollowell, G. P., Brooks, R. M., & Anderson, Y. B. (2017). Course design, Quality Matters training, and student outcomes. *American Journal of Distance Education*, *31*(3), 207–216. https://doi.org/10.1080/08923647.2017.1301144

Howard, S. K., Tondeur, J., Siddiq, F., & Scherer, R. (2021). Ready, set, go! Profiling teachers' readiness for online teaching in secondary education. *Technology, pedagogy, and education*, *30*(1), 141-158. https://doi.org/10.1080/1475939X.2020.1839543

Howley, D. (2022). Experiences of teaching and learning in K-12 physical education during COVID-19: an international comparative case study. *Physical education and sport pedagogy*, *27*(6), 608-625. https://doi.org/10.1080/17408989.2021.1922658

Hughes, J.E., McLeod, S., Brown, R., Maeda, Y. & Choi, J. (2007) Academic Achievement and

Perceptions of the Learning Environment in Virtual and Traditional Secondary Mathematics Classrooms. *American Journal of Distance Education*, 21:4, 199-214, 10.1080/08923640701595365

International Society for Technology in Education (ISTE) (2023). Retrieved February 1, 2023. iste.org

Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2022). Online teaching in K-12 education in the United States: A systematic review. *Review of Educational Research*. https://doi.org/10.3102/00346543221105550

Kali, Y., McKenney, S., & Sagy, O. (2015). Teachers as designers of technology enhanced learning. *Instructional Science*, *43*(2), 173-179. https://doi.org/10.1007/s11251-014-9343-4

Kathuria, H., & Becker, D. W. (2021). Leveraging course quality checklist to improve online courses. *Journal of Teaching and Learning with Technology*, *10*(1). https://doi.org/10.14434/jotlt.v10i1.31253

Kearns, L. R., & Mancilla, R. (2017). The impact of Quality Matters™ professional development on teaching across delivery formats. *American Journal of Distance Education*, *31*(3), 185-197. https://doi.org/10.1080/08923647.2017.1301145

Kearsley, G., & Blomeyer, R. (2004). Preparing K-12 teachers to teach online. *Educational Technology*, *44*(1), 49–52. http://www.jstor.org/stable/44428876

Kelley, S., (2024). Validating outcome mapping using external benchmarking. *Online Journal of Distance Learning Administration, 27(*1). https://ojdla.com/articles/validating-outcome-mapping-using-external-benchmarking

Kennedy, K., Tomaselli, K., & Stimson, R. (2018). National Standards for Quality Online Courses (K-12) and QM K-12 secondary and K-12 publisher rubric revision literature review. Michigan Virtual Learning Research Institute. https://www.qualitymatters.org/sites/default/files/research-docs-pdfs/National-Standards-for-Quality-Online-Courses-Lit-Review-122818.pdf

Kiekel, J., Flores, S., Walters, N. M. (2019). Engaging online K-12 students: Using instant messaging to foster teacher-student relationships. In T.L. Heafner, R. Harsthone, & R. Thripp. (Eds).,

Emerging Practices and Methods for K-12 Online and Blended Learning. IGI Global.

Kimmons, R. (2014). Developing open education literacies with practicing K-12 teachers. *International Review of Research in Open and Distributed Learning*. *15*(6), 69-92. https://www.erudit.org/en/journals/irrodl/2014-v15-n6-irrodl04946/1065553ar/

Kipp, K. & Rice, K. (2019). Building Engagement in K-12 Virtual learning. In T.L. Heafner, R. Harsthone, & R. Thripp. (Eds)., *Emerging Practices and Methods for K-12 Online and Blended Learning.* pp. 193-212. IGI Global.

Larkin, I.M, Brantley-Dias, L., Lokey-Vega, A. (2016). Job satisfaction, organization commitment, and t turnover intention of online teachers in the K-12 Setting. *Virtual learning. 20*(3), 26-51. https://web.p.ebscohost.com/ehost/detail/detail?vid=5&sid=1effd8d6-91ef-4f68-qb56637785c748d4a%40redis&bdata=JkF1dGhUeXBlPXNoaWImYXV0aHR5cGU9c2hpYiZzaXRlPWVob3N0LWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#db=eric&AN=EJ1113339

Larson, J. & Archambault, K. (2019). The extent of K-12 online teacher development: A disconnect between preparation and practice. In T.L. Heafner, R. Harsthone, & R. Thripp. (Eds)., *Emerging Practices and Methods for K-12 Online and Blended Learning.* pp. 57-77. IGI Global.

Lee, J.E., Recker, M., & Yuan, M. (2020). The validity and instructional value of a rubric for evaluating online course quality: An empirical study. *Virtual learning*, *24*(1), 245-263. https://doi.org/10.24059/olj.v24i1.1949

Lee, M., & Figueroa, R. (2012). Internal and external indicators of virtual learning success: A guide to success in K-12 virtual learning. *Distance Learning, 9*(1), 21-28. https://www.proquest.com/scholarly-journals/internal-external-indicators-virtual-learning/docview/1014187293/se-2

Leech, N., Gullet, S., Cummings, M. H., & Haug, C. (2022). The challenges of remote K-12 education during the COVID-19 Pandemic: Differences by grade level. *Virtual learning*, *26*(1), 245-267. 10.24059/olj.v26i1.2609

Legon, R. (2015). Measuring the impact of the Quality Matters™ Rubric: A discussion of possibilities.

American Journal of Distance Education, 29(3), 166-173. https://www.tandfonline.com/doi/citedby/10.1080/08923647.2015.1058114?scroll=top&needAccess=true&role=tab&aria-labelledby=cit

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. The Sage handbook of qualitative research, 4(2), 97-128.

Linton, J. N. & Journell, W. (2015). Meeting the demand for online education: A study of a state-run program designed to train virtual K-12 teachers. In T. Heafner, R. Hartshorne, & T. Petty (Eds.), *Exploring the Effectiveness of Online Education in K-12 Environments* (45-65). IGI Global. https://doi.org/10.4018/978-1-4666-6383-1.ch003

Lowenthal, P. R., Humphrey, M., Conley, Q., Dunlap, J. C., Greear, K., Lowenthal, A., & Giacumo, L. A. (2020). Creating accessible and inclusive virtual learning: Moving beyond compliance and broadening the discussion. *Quarterly Review of Distance Education*, *21*(2), 1–82. https://www.infoagepub.com/products/Quarterly-Review-of-Distance-Education-21-2

Lowes, S. (2005). *Online teaching and classroom change: The impact of virtual high school on its teachers.* New York, NY: Institute for Learning Technologies; Teachers College.

Lowes, S. & Lin, P. (2015). Learning to learn online: Using locus of control to help students become successful online learners. *Journal of Virtual learning Research*, 1(1), 17-48. (AACE). Retrieved January 31, 2023, https://www.learntechlib.org/primary/p/149845/.

Ludwika, A. G., & Linda, B. N. (2017). *Online Teaching at Its Best*. Jossey-Bass.

Luo, T., Hibbard, L., Franklin, T., & Moore, D. R. (2017). Preparing teacher candidates for virtual field placements via an exposure to K-12 Online Teaching. *Journal of Information Technology Education, 16*, 1–14. https://doi.org/10.28945/3626

Lynch, S. & Gaston, T. (2020). Quality Matters impact on student outcomes in an online program. *The Journal of Educators Online, 17(*2).

Martin, F., Bacak, J., Polly, D. & Dymes, L. (2021) A systematic review of research on K-12 online

teaching and learning: Comparison of research from two decades 2000 to 2019, *Journal of Research on Technology in Education, 55,* 190-209. 10.1080/15391523.2021.1940396

Masterman, Liz. (2019). The challenge of teachers' design practice. *Rethinking Pedagogy for a Digital Age: Principles and Practices of Design* (3rd ed.) (pp.120-133). Routledge. https://doi.org/10.4324/9781351252805

Mayper, T. (2022). *Faculty Perception of Quality Assurance in Online Courses: A Phenomenological Study*. ProQuest Dissertations & Theses.

Mercer, R. E. (2014). *Impacts of a Quality Matters™ workshop on faculty who design, develop, and deliver online courses: A mixed methods study.* ProQuest Dissertations & Theses Global. (1664841547). https://www.proquest.com/dissertations-theses/impacts-quality-matters™-workshop-on-faculty-who/docview/1664841547/se-2

Merriam, S. (1998). *Qualitative Research and Case Study Applications in Education*. Jossey-Bass.

Molnar, A., Miron, G., Hagle, S., Gulosino, C., Mann, B., Huerta, L.A., Rice, J.K., Glover, A., & Bill, K. (2023). Virtual schools in the U.S. 2023. National Education Policy Center. http://nepc.colorado.edu/publication/virtual-schools-annual-2023

Moore-Adams, B. L., Jones, W. M., & Cohen, J. (2016). Learning to teach online: A systematic review of the literature on K-12 teacher preparation for teaching online. *Distance Education*, *37*(3), 333–348. https://doi.org/10.1080/01587919.2016.1232158

Morgan, H. (2022). Conducting a qualitative document analysis. *Qualitative Report*, *27*(1), 64–77. https://doi.org/10.46743/2160-3715/2022.5044

Morrison, L. & Hughes, J. (2023) Making the shift to virtual professional learning. *Technology,Pedagogy and Education, 32(*1), 105-116. 10.1080/1475939X.2022.2156918

Muljana, P. S., & Luo, T. (2019). Factors contributing to student retention in virtual learning and recommended strategies for improvement: A systematic literature review. *Journal of Information Technology, 18,* 19-57. https://www.proquest.com/docview/2610396541?accountid=14605&pq-origsite=primo

Murillo, A.P. and Jones, K.M.L. (2020).A “just-in-time” pragmatic approach to creating Quality Matters-informed online courses. *Information and Learning Sciences, 121* (5/6). 365-380. https://doi.org/10.1108/ILS-04-2020-0087

NACOL Releases Going Virtual! The Status of Professional Development for K-12 Online Teachers in Honor of National Distance Learning Week. (2007). *PR Newswire*.

National Center for Education Statistics. (2021). *US education in the time of Covid.* https://nces.ed.gov/surveys/annualreports/topical-studies/covid/

National Standards for Quality Online Teaching (NSQ). (2022). Retrieved February 1, 2023 from https://www.nsqol.org/the-standards/quality-online-teaching/

Niess, M. L. (2005). Preparing teachers to teach science and mathematics with technology: Developing a technology pedagogical content knowledge. *Teaching and Teacher Education*, *21*(5), 509-523. https://doi.org/10.1016/j.tate.2005.03.006

Ntuli, E., & Kyei-Blankson, L. (2016). Improving K-12 virtual learning: Information literacy skills for teacher candidates. *International Journal of Information and Communication Technology Education*, *12*(3), 38–50. https://doi.org/10.4018/IJICTE.2016070104

North Carolina Department of Public Instruction [NCDPI] (2023). *NC Digital Learning Competencies for Educators.* https://www.dpi.nc.gov/districts-schools/districts-schools-support/digital-teaching-and-learning/digital-teaching-learning-standards#DigitalLearningCompetenciesforEducators-351

Oliver, K., Kellogg, S., Townsend, L., & Brady, K. (2010). Needs of elementary and middle school teachers developing online courses for a virtual school. *Distance Education, 31*(1), 55-75. https://www.proquest.com/scholarly-journals/needs-elementary-middle-school-teachers/docview/598424349/se-2?accountid=14605

Online Learning Consortium (OLC) (2024). Retrieved September 24, 2024. https://onlinelearningconsortium.org.

Ortiz, K. R., Rice, M. F., Curry, T., Mellard, D., & Kennedy, K. (2021). Parent perceptions of online

school support for children with disabilities. *American Journal of Distance Education, 35*(4), 276-292. https://doi.org/10.1080/08923647.2021.1979343

Patrick, S., & Powell, A. (2009). A summary of research on the effectiveness of K-12 online learning. *International Association for K-12 Virtual learning. Social Science Premium Collection*. https://www.proquest.com/reports/summary-research-on-effectiveness-k-12-online/docview/742873152/se-2

Pedro, N.S. & Kumar, S. (2020). Institutional support for online teaching in quality assurance frameworks. Virtual learning, *24*(3), 50-66. https://doi.org/10.24059/olj.v24i3.2309

Quality Matters™ (2008). Quality Matters™ Graphic of the course design process. Retrieved February 1, 2024, from www.qualitymatters.org

Quality Matters™ (2018). Quality Matters™ K-12 Rubric Fifth Edition. Retrieved November 13, 2022, from www.qualitymatters.org

Quillen, I. (2011). Virtual schools offer PD programs for E-Teaching: Homegrown programs target the needs of educators teaching online classes. *Education Week*, *31*(09), 18. https://link.gale.com/apps/doc/A271817283/AONE?u=char69915&sid=bookmark-AONE&xid=20e6c044

Quiroz, R. E., Ritter, N. L., Li, Y., Newton, R. C., & Palkar, T. (2016). Standards based design: Teaching K-12 educators to build quality online courses. *Journal of Virtual learning Research*, *2*(2), 123–144. https://eric.ed.gov/?id=EJ1148606

Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case study method: A step-by-step guide for business researchers. *International Journal of Qualitative Methods, 18*. https://doi.org/10.1177/1609406919862424

Ravitch, S. & Carl, N. (2021). *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological.* (2nd edition). Sage.

Rehn, N., Maor, D., & McConney, A. (2018). The specific skills required of teachers who deliver K-12

distance education courses by synchronous videoconference: Implications for training and professional development. *Technology, Pedagogy and Education, 27*(4), 417–429. https://doi.org/10.1080/1475939X.2018.1483265

Repetto, J., Cavanaugh, C., Wayer, N., & Liu, F. (2010). Virtual high schools: Improving outcomes for students with disabilities. *Quarterly Review of Distance Education, 11*(2), 91–104. https://eric.ed.gov/?id=EJ914162

Rice, K. L. (2006). A comprehensive look at distance education in the K-12 context. *Journal of Research on Technology in Education, 38*(4), 425–448. https://doi.org/10.1080/15391523.2006.10782468

Rice, K. (2014). Research and history of policies in K-12 online and blended learning. In R.E. Ferdig and K. Kennedy (Eds)., *Handbook of Research on K-12 Online and Blended Learning.* pp. 51-81. ETC press.

Rice, K., & Dawley, L. (2009). Going virtual: The status of professional development for K-12 online teachers. *Journal of Technology and Teacher Education. 17*(4), 523-545. https://www.researchgate.net/publication/234759940

Rice, M.F. & Bailon, M. (2022) A qualitative analysis of publicly available standards and guidance about digital literacies in U.S. states. *Educational Information Technology*. *(27)*9. https://doi.org/10.1007/s10639-022-11482-x

Rice, M. F., & Ortiz, K. R. (2021). Evaluating Digital Instructional Materials for K-12 Online and Blended Learning. *TechTrends*, 65(6), 977–992. https://doi.org/10.1007/s11528-021-00671-z

Rice, M., & Carter, Jr., R. A. (2015). When we talk about compliance it's because we lived it: Online educators' experiences supporting students with disabilities. *Virtual learning, 19*(5), 18–36. https://files.eric.ed.gov/fulltext/EJ1085761.pdf

Rigaud, V. M., Googins, J., & Burton, B. A. (2022). The untold stories from COVID-19: The calamity of implementing curriculum during a pandemic. *Mid-Western Educational Researcher, 34*(1), 3–28. https://www.researchgate.net/publication/359607181_The_Untold_Stories_from_Covid-19_The_Calamity_of_Implementing_Curriculum_During_a_Pandemic

Robinson, D. J. (2017). *A Delphi Study to Examine the Quality Measurement Standards by Online Instructors Using the Quality Matters™ Rubric as a Basis for Creating Instructional Materials* ProQuest Dissertations Publishing.

Roblyer, M. D. (2005). Who plays well in the virtual sandbox? Characteristics of successful online students and teachers. *SIGTel Bulletin,* 2.

Roblyer, M. D. & Marshall, J.C. (2002) Predicting success of virtual high school students, *Journal of Research on Technology in Education*, *35*(2), 241-255, 10.1080/15391523.2002.10782384

Roehrs, C., Wang, L., & Kendrick, D. (2013). Preparing faculty to use the Quality Matters model for course improvement. *Journal of Virtual learning and Teaching, 9*(1), 52. https://www.proquest.com/scholarly-journals/preparing-faculty-use-quality-matters-model/docview/1500386891/se-2

Rozitis, C. P. (2017). Instructional design competencies for online high school teachers modifying their own courses. *TechTrends, 61*(5), 428–437. https://doi.org/10.1007/s11528-017-0204-2

Sadaf, A., Kim, S. Y., & Wang, Y. (2021). A comparison of cognitive presence, learning, satisfaction, and academic performance in case-based and non-case-based online discussions. *American Journal of Distance Education*, *35*(3), 214-227. https://doi.org/10.1080/08923647.2021.1888667

Sadaf, A., Martin, F., & Ahlgrim-Delzell, L. (2019). Student perceptions of the impact of "Quality Matters™" certified online courses on their learning and engagement. *Virtual learning*, *23*(4). https://doi.org/10.24059/olj.v23i4.2009

Saldaña, J. (2021). *The Coding Manual for Qualitative Researchers.* (4th edition). Sage.

Samuel, A. (2022). "I'm not trying to recreate the classroom": A qualitative study to help faculty make sense of online interactions. *American Journal of Distance Education*, *36*(2), 121-134. https://doi.org/10.1080/08923647.2022.2049150

Schmidt, S. W., Hodge, E. M., & Tschida, C. M. (2013). How university faculty members developed their

online teaching skills. *Quarterly Review of Distance Education, 14*(3), 131-140,179-180. https://www.proquest.com/scholarly-journals/how-university-faculty-members-developed-their/docview/1510292113/se-2

Shattuck, K. (2014). Research matters! What we're learning from QM-focused research. Presentation at 6th Annual QM Conference.

Shattuck, K. (2015). Research inputs and outputs of Quality Matters: Update to 2012 and 2014 versions of 'What We're Learning from QM-Focused Research.' Quality Matters.

Sheets, L.A., Barry, M. & Bosch, E. K. (2023) Quality Matters review of LIB 2210: Applying the QM Rubric for higher education to an Information Literacy course. *Journal of Library & Information Services in Distance Learning 1*(1), 10.1080/1533290X.2023.227287

Siko, J. P., & Barbour, M. K. (2022). Is it any wonder, I reject you first: Pre-pandemic perceptions of K-12 virtual learning. *TechTrends, 66*(2), 301-309. https://doi.org/10.1007/s11528-022-00709

Simunich, B., McMahon, E. A., Hopf, L., Altman, B. W., & Zimmerman, W. A. (2022). Creating a culture of online quality: The people, policies, and processes that facilitate institutional change for online course quality assurance. *American Journal of Distance Education, 36*(1), 36-52. https://doi.org/10.1080/08923647.2021.2010021

Smith, S. J., Basham, J., Rice, M. F., & Carter, R. A. (2016). Preparing special educators for the K-12 virtual learning environment: A survey of teacher educators. *Journal of Special Education Technology, 31*(3), 170–178.

Smith, R., Clark, T., & Blomeyer, R. (2005) A synthesis of new research on K-12 online learning. Learning Point Associates. www.ncrel.org/tech/synthesis/

Southern Regional Education Board (SREB) (2023). Retrieved January 12, 2023, from sreb.org

Stake, R. E. (1995). *The Art of Case Study Research*. Sage.

Stone, C., & Springer, M. (2019). Interactivity, connectedness and "teacher-presence:" Engaging and retaining students online. *Australian Journal of Adult Learning,* 59(2), 146–169. https://doi.org/10.3316/aeipt.224048

Storandt, B. C., Dossin, L. C., & Lacher, A. P. (2012). Toward an understanding of what works in professional development for online instructors: The case of PBS TeacherLine. *Journal of Asynchronous Learning Networks JALN*, *16*(2), 121. https://doi.org/10.24059/olj.v16i2.216

Sun, Y., & Rogers, R. (2021). Development and validation of the virtual learning self-efficacy scale (OLSS): A structural equation modeling approach. *American Journal of Distance Education*, *35*(3), 184-199. https://doi.org/10.1080/08923647.2020.1831357

Swan, K., Matthews, D., Bogle, L., Boles, E., & Day, S. (2012). Linking online course design and implementation to learning outcomes: A design experiment. *The Internet and Higher Education*, *15*(2), 81–88. https://doi.org/10.1016/j.iheduc.2011.07.002

Terrazas-Arellanes, F. E., Strycker, L. A., & Walden, E. D. (2019). Web-based professional development model to enhance teaching of strategies for online academic research in middle school. *Journal of Research on Technology in Education*, *51*(2), 118–134 https://doi.org/10.1080/15391523.2018.1564637

Trinter, C. P., & Hughes, H. E. (2021). Teachers as curriculum designers: Inviting teachers into the productive struggle. *RMLE Online: Research in Middle Level Education*, *44*(3), 1–16. https://doi.org/10.1080/19404476.2021.1878417

Trust, T. & Horrocks, B (2017). 'I never feel alone in my classroom': Teacher professional growth within a blended community of practice. Professional Development in Education, 43(4), 645-665, 10.1080/19415257.2016.1233507

Tsai, C.-W., & Shen, P.-D. (2013). Improving undergraduates' experience of virtual learning and involvement: An innovative online pedagogy. *International Journal of Enterprise Information Systems*, *9*(3), 100–112. https://doi.org/10.4018/jeis.2013070105

Vagle, M. V. (2018). *In Crafting Phenomenological Research.* Routledge.

Vasquez III, E., & Serianni, B. A. (2012). Research and Practice in Distance Education for K-12 Students with Disabilities. *Rural Special Education Quarterly*, 31(4), 33–42. https://doi.org/10.1177/875687051203100406

Vawter, D. H., & McMurtrie, D. H. (2021). Meeting the academic, social, and emotional needs of our middle level students in the virtual environment. *Middle School Journal, 53*(1), 26-35. https://doi.org/10.1080/00940771.2021.1997532

Virtual Learning Leadership Alliance (VLLA) (2023). Retrieved January 12, 2023, vlla.org.

Wang, C. X. (2021). CAFE: An instructional design model to assist K-12 teachers to teach remotely during and beyond the Covid-19 pandemic. *TechTrends, 65*(1), 8-16. https://doi.org/10.1007/s11528-020-00555-8

Watson, J. & Murin, A. A (2014). History of K-12 online and blended instruction in the United States. In R.E. Ferdig and K. Kennedy (Eds)., *Handbook of Research on K-12 Online and Blended Learning.* ETC press.

Watson, J.F. and Kalmon, S. (2005). Keeping pace with K-12 virtual learning: A review of state-level policy and practice. *Learning Point Associates.* http://www.ncrel.org/tech/pace2/index/

Web Accessibility Initiative (2023). *Introduction to Web Accessibility*. https://www.w3.org/WAI/fundamentals/accessibility-intro

Weiner, C. (2003). Key ingredients to virtual learning: Adolescent students' study in cyberspace – The nature of the study. *International Journal on E-Learning, 2*(3), 44-50. https://www.learntechlib.org/primary/p/14497/

Wiggins, G. &, McTighe, J. (2005). *Understanding by Design*. (2nd edition). ASCD.

Willis, R. L., Lynch, D., Fradale, P., & Yeigh, T. (2019). Influences on purposeful implementation of ICT into the classroom: An exploratory study of K-12 teachers. *Education and Information Technologies, 24*(1), 63-77. https://doi.org/10.1007/s10639-018-9760-0

Wright, R. (2018). Quality Matters™: The implementation of a quality assurance program for a virtual campus at a state college in Florida. *Distance learning (Greenwich, Conn.), 15*(3), 41-49

Yang, D. (2017). Instructional strategies and course design for teaching statistics online: Perspectives from online students. *IJ STEM Ed. 4*(34). https://doi.org/10.1186/s40594-017-0096-x

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. Qualitative Report, *20(*2), 134–152. https://doi.org/10.46743/2160-3715/2015.2102

Yin, R. K. (2014). *Case Study Research: Design and Methods.* (5th edition). Sage.

York, C. S., & Richardson, J. C. (2012). Interpersonal interaction in virtual learning: Experienced online instructors' perceptions of influencing factors. *Journal of Asynchronous Learning Networks, 16*(4), 83-98. https://www.proquest.com/scholarly-journals/interpersonal-interaction-online-learning/docview/1238188998/se-2

Zhang, Y., & Lin, C. H. (2021). Effects of Community of Inquiry, learning presence and mentor presence on K-12 virtual learning outcomes. *Journal of Computer Assisted Learning*, *37*(3), 782-796. https://doi.org/10.1111/jcal.12523

APPENDIX A: SITE DIRECTOR EMAIL

Dear Dr. Murphy,

I am interested in conducting a qualitative focused on the experiences and perspectives of K-12 virtual teachers who have served as Quality Matters™ Course Representatives for organization-managed master course peer reviews. The study aims to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. The study is a part of an applied dissertation which will be completed for partial fulfillment of EdD requirements.

Since you are the Executive Director of North Carolina Virtual Public School, the selected site of my case study, I seek your permission to request, collect, and analyze LMS course materials and Google Drive documents aligned with the organizational-based Quality Matters™ training and support process for teachers including the LMS -based training for teachers, the LMS courses used for QM review including teacher-generated materials, and Google Drive documents supporting the teacher Course Representative experience including template documents teachers populated to prepare for review.

I seek your permission to contact teachers via their organizational email who are currently or previously enrolled in the NCVPS-based QM Course Representative training course to acquire a purposeful sample of teachers at your organization.

In the outreach email, teachers will be asked to complete an initial interest survey verifying their eligibility and providing online consent. Upon completion of the interview, participants will receive a $30 Amazon gift card sent to their personal email.

In report findings, NCVPS will be identified as a K-12, state-led, supplemental virtual school, but no regional identifiers will be incorporated.

If there are any concerns or questions regarding this study, please email me at dmleongu@charlotte.edu or via cell 704-608-9422.

You may also contact dissertation committee chair, Beth Oyarzun at beth.oyarzun@charlotte.edu or 704-687-8711.

Thank you,

Darlene M. Schaefer
EdD Candidate, Learning, Design, and Technology

APPENDIX A (CONTINUED): SITE DIRECTOR EMAIL

By signing this document, you are agreeing to support LMS access, Google Drive access, and teacher solicitation and participation at your organization to support inquiry on how your program applies the Quality Matters™ rubric. Please be sure you understand what the study is about before you sign. You will receive a copy of this document for your records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

_____
Executive Director Name (PRINT)

As the Executive Director of _, I grant EdD candidate, Darlene Schaefer, access via her UNC Charlotte email to the site Learning Management System materials aligned to this study. _____ Initial

As the Executive Director of _, I grant EdD candidate, Darlene Schaefer, access via her UNC Charlotte email to Google Drive materials aligned to this study.
_____ Initial

As the Executive Director of _, I grant EdD candidate, Darlene Schaefer, permission to contact teachers enrolled in the Course Representative Training course as a part of this study. _____ Initial

_____
Signature Date

APPENDIX B: PARTICIPATION SOLICITATION EMAIL

Hello!

You are receiving this email as organizational records indicate you have participated in the Quality Matters™ course review process as a Course Representative for an organization-managed master course.

We are interested in conducting a case study inquiry focused on K-12 online teachers' experiences and perceptions as Quality Matters™ Course Representatives. The study aims to guide K-12 educators on the potential professional impact of serving as Course Representatives for organizational course reviews. The study is a part of an applied dissertation which will be completed for partial fulfillment of EdD requirements.

We are looking for teachers who have served as QM Course Representatives to participate in a 60-minute semi-structured interview inquiring about their experiences and perspectives. All documents and study findings will ensure your privacy, and you will receive further information on how your identity will be protected on a signed consent form.

The anticipated date of interviews is May and June 2024. To compensate for your time, all participants who attend the scheduled interview will receive a $30 Amazon gift card sent to their personal email. Identified participants will receive an email to confirm an interview time and to complete a signed consent form.

If you are interested in participating in this study, please complete the Google Interest Form.

If there are any concerns or questions regarding this study, please email me at dmleongu@charlotte.edu or via cell 704-608-9422. You may also contact dissertation committee chair, Beth Oyarzun at beth.oyarzun@charlotte.edu or 704-687-8711.

Thank you,

Darlene M. Schaefer
EdD Candidate, Learning, Design, and Technology

APPENDIX C: RESEARCH QUESTIONS AND DATA COLLECTION

Research Questions	Document Sources	Interview Questions	Summary of how data addresses the research question
RQ1: What led K-12 teachers to serve as QM Course Representatives?	Email solicitation to teachers offering Course Representative participation Job description of Course Representative contract for the organization Preparation training from the Learning Management System Documents and templates the organization provided to support the Course Representative process.	Provide a brief description of your daily work expectations and routines? Tell me about how you decided to participate in the QM course review process as a QM Course Representative? What professional development experiences have had the greatest impact on your online instructional practice? Tell me about how you decided to participate in the QM course review process as a QM Course Representative.	Documents describe teacher expectations of the Course Representative process. Documents describe how the organization communicated the expectations with teachers. Questions ask teachers about their professional background and their experience being offered an opportunity to serve as QM Course Representative.
RQ2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?	Preparation training from the Learning Management System Documents and templates the organization provided to support the Course Representative process. Sample welcome announcements teachers created for the review Sample syllabus teachers created for the review	Describe, in your own words, the training you received prior to beginning the QM course review process. Describe, in your own words, what you needed to do as a QM Course Representative, including what you did to prepare for the review, what you did during the active review, and what you did in the post-review. At this time, I am going to appshare some of the resources you provided in the course you set up for QM review. I have a few questions I am going to ask you about these resources that align with the Course Representative process and QM review. First, tell me about your welcome announcement. Why did you decide on the media and words you used, and in what ways did your QM experience and understanding of the rubric support the creation of this announcement? Now tell me about your teacher introduction page. In what ways did your QM experience and your understanding of the rubric support your introduction?	The documents describe the professional development materials and templates teachers were provided or asked to complete as they served as Course Representatives. The interview questions ask participants to describe their responsibilities, the training and support offered, the materials they provided for the QM peer review, and their reasoning for creating/providing these materials.

APPENDIX C (CONTINUED): RESEARCH QUESTIONS AND DATA COLLECTION

RQ3: What aspects of the Course Representative experience do teachers perceive as significant to professional development?	Copy of the QM K-12 rubric Sample welcome announcements teachers created for the review Sample syllabus teachers created for the review	Tell me about the syllabus you provided for the review. In what ways did your QM experience and your understanding of the rubric support your introduction? What, if anything, do you see as the impact of your Course Representative experience? What overall takeaways, if any, do you have from the QM Course Representative process? How would you compare the Course Representative process to other professional development opportunities? What overall takeaways, if any, do you have from the QM process?	Documents include the QM eight General Standards and 43 Specific Review Standards as well as artifacts teachers created to meet these standards for a course review. Interview questions ask teachers to reflect on what aspects, if any, of the Course Representative process they perceive as significant to professional practice.

APPENDIX D: INTERVIEW PROTOCOL

Overview of case study

The information you provide during this interview is critical to addressing research questions focused on the experience and perspectives of teachers who served as Course Representatives. Additionally, as a part of this case study, documents will be requested by organizational leadership to demonstrate the training and support you were provided during the course review process. To support research triangulation, content you may have completed as a part of the Quality Matters™ course review process, including your teacher announcements, welcome message, syllabus, and customized introduction page, will be discussed in this study and screen shared during this interview. All artifacts will be redacted or replaced with an alias to ensure your privacy. Do you understand how the documents you have created for the QM review process will be used in this study?

Warm-up questions:

- Tell me about your background and overall professional experience.
- *Describe your online professional history prior to your service as a QM Course Representative – this can include any experiences you have had in addition to teaching online.*
- *Describe your philosophy about teaching and learning online.*

Teaching Perceptions and Responsibilities

- Provide a brief description of your daily work expectations and routines?
- *You may also describe your daily expectations of any other roles you hold or have held (teacher instructional leader, course leader, course developer)*
- What professional development experiences have had the greatest impact on your online instructional practice?

QM Course Representative Participation

- How long were you teaching online before you served as a QM Course Representative?
- Tell me about how you decided to participate in the QM course review process as a QM Course Representative.
- *What led you to participate?*
- *Why did you decide to participate?*

QM Training

- Describe, in your own words, the training you received prior to beginning the QM course review process.
- *What aspects of the QM process do you believe were well explained in the training?*
- *What aspects of the QM process do you believe were not well explained in the training?*

APPENDIX D (CONTINUED): INTERVIEW PROTOCOL

QM Course Representative Process

- Describe, in your own words, what you needed to do as a QM course representative, including what you did to prepare for the review, what you did during the active review, and what you did in the post-review.
- *What changes did you make to your course because of the review?*
- *Do you believe you would have made these changes without the peer review? Explain.*
- What, if anything, do you see as the impact of your Course Representative experience?
- *On your professional practice?*
- *How about your perceptions of online teaching and learning?*
- How would you compare the Course Representative process to other professional development opportunities you have experienced?

QM Rubric

- Although you received some exposure to the rubric, in our interview confirmation correspondence, a one-page copy of the Quality Matters rubric was shared with you. The rubric provides eight general standards and 43 specific review standards. What, if any, specific aspects of the QM rubric do you perceive as significant to your online instructional practice (*a copy of the K-12 QM rubric will be shared as a part of the interview scheduling confirmation email*)? *You may reference general standards or specific standards or aspects of the rubric in general.*
- What, if any, specific aspects of the QM rubric do you find as a hindrance to effective teaching practice (*a copy of the K-12 QM rubric will be shared as a part of the interview scheduling confirmation emai*l)? *You may reference general standards or specific standards or aspects of the rubric in general.*
- In what ways, if any, has your familiarity with the QM rubric impacted your your professional practice?

Discussion of Teacher Artifacts created for QM Review

- At this time, I am going to appshare some of the resources you provided in the course you set up for QM review. I have a few questions I am going to ask you about these resources that align with the Course Representative process and QM review.
    - First, tell me about your welcome announcement. Why did you decide on the media and content you used, and in what ways did your experience and your understanding of the rubric support the creation of this announcement?
    - Now tell me about your teacher introduction page. In what ways did your QM experience and your understanding of the rubric support your introduction?
    - Tell me about the syllabus you provided for the review. In what ways did your QM experience and your understanding of the rubric support your introduction?

Wrap-Up

- What overall takeaways, if any, do you have from the QM Course Representative process?
- *Anything else you would like to share?*

Thank you so much for participating in this interview. I plan to reflect on your responses and transcribe our discussion. I will send you a copy of the transcript, and a summary of initial findings within the next two weeks via email. You will be provided the opportunity to review the transcript and summary through email to ensure they convey your perspective. As I am reviewing data at any time during this study, I may email you back for clarity on discussion points or to follow up on other items that might emerge during data analysis. Will this be, ok?

APPENDIX E: COPY OF NVIVO CODEBOOK

Key: Rows with the darkest shade colors present the research questions. Rows with the second darkest shade of each color represents the upper-level themes. Rows with lighter shade and italics represent sub-themes and lower-level codes. Most themes, unless noted, are inductive themes. In some cases, inductive themes may integrate into deductive themes or deductive themes may integrate into inductive themes.

Code Name	Code Description	Sources	References
RQ1: What led K-12 virtual teachers to serve as QM Course Representatives?	Before the process; Organization-based factors; Participant-based factors; Mutual factors that existed *before* the Course Representative process began.	10	276
Acquiescence	Participant-based factor	4	10
Career Experience	Organization-based factor	8	42
Improving a course	Participant-based factor	3	9
Professional Curiosity	Participant-based factor	5	11
Leadership Roles	Organization-based factor	7	40
Philosophical Alignment	Mutual factors	9	146
High Professional Standards		*7*	*65*
Online Teaching Philosophy of Participants		*5*	*20*
Participant Distinction between Online vs. In-Person		*5*	*15*
RQ2: What are the experiences and perspectives of K-12 virtual teachers serving as QM Course Representatives?	During the process; Description of the process; Perspectives on the process during the Course Representative process.	10	202
Challenges and Critiques		10	132
Extensive scope of work		8	40
Learning Curve		5	15
Disagreement with process and results of QM review		4	18
Rote and Redundant		4	8

APPENDIX E (CONTINUED): COPY OF NVIVO CODEBOOK

Code Name	Code Description	Sources	References
Description of the experience	Participants describe the Course Representative experience	8	62
A&W Industry Standard Preparation (Deductive Theme)	References to the first phase of the Ali and Wright (2017) model	6	8
Documents for QM process	*Emergent theme that corresponded with Ali and Wright (2017) model*	*6*	*20*
Organizational Training for QM	*Emergent theme that corresponded with Ali and Wright (2017) model*	*5*	*8*
Lock Step Process	*Emergent theme that corresponded with Ali and Wright (2017) model*	*10*	*17*
A&W Self Reflection (Deductive Theme)	References to the second phase of the Ali and Wright (2017) model	7	22
Variability depending on course	*Emergent theme that corresponded with Ali and Wright (2017) model*	8	17
A&W Awareness of Institutional Resources (Deductive Theme)	References to the third phase of the Ali and Wright (2017) model	5	12
Support received from organization	*Emergent theme that corresponded with Ali and Wright (2017) model*	11	57
Lapse of recollection	Participants could not recall all aspects of the process.	7	8
RQ3: AFTER What about the Course Representative experience do teachers perceive as significant to professional development?	Aspects of the process that contributed to professional development and aligned to the Ali and Wright (2017) model or the QM rubric.	14	126
Benefits	Beneficial for the organization Beneficial for participants	7	71
A&W Applying New Knowledge	References to the fourth phase of the Ali and Wright (2017) model	7	22
Application in Instructional Practice	*Emergent theme that corresponded with Ali and Wright (2017) model*	*7*	*25*

APPENDIX E (CONTINUED): COPY OF NVIVO CODEBOOK

Code Name	Code Description	Sources	References
Enriched Understanding of the Virtual Learning Environment	*Emergent theme that corresponded with Ali and Wright (2017) model*	*7*	*20*
Leadership Application	*Emergent theme that corresponded with Ali and Wright (2017) model*	*6*	*12*
Reference to Specific Rubric Standards	Specific references to the eight General Standards and seven Specific Review Standards.	14	53