CURRICULUM ORIENTATIONS OF VIRTUAL TEACHERS

By

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ABSTRACT

This study explored the curriculum orientation preferences of K-12 public school teachers who provided instruction in virtual settings (n=47) in a midwestern state. Curriculum orientations were explored using a mixed-methods design. Quantitative assessments data revealed a pattern of curriculum orientations similar to teachers working in brick-and-mortar settings. However, qualitative interviews conducted with a subsample of 10 participants indicated that these virtual teachers expressed a choice to use online instruction to develop the whole child, to connect with the family, and to make the overall educational experience practical and pertinent to the learner and the local context. In addition, they highlighted a lack of appropriate professional education and experiences to prepare them to implement curriculum in a virtual environment. The combination of quantitative and qualitative procedures and related data provided a broad and deep understanding of teachers' curriculum preferences as they related to making instructional decisions in a virtual school environment. In addition, these results contribute to the growing body of knowledge about K-12 virtual teachers and the importance of understanding the way curriculum is viewed in different settings.

DEDICATION

This dissertation is dedicated to my loving parents who instilled in me, at a young age, that education provides opportunities, so get as much as you can. Also, to always dream, have a plan, and go after it. I could not have been blessed with a better set of parents. To my wonderful husband, thank you for all of your support, for your forgiving heart, and for being there during those important milestones. To my brother, thank you for always bragging on me and making me feel important. For that, I had to live up to your expectations of me. To my family and friends, thank you for your continued encouragement not to give up and for understanding my absences at times. Most importantly, I want to dedicate this dissertation to Logan, who has been with me through thick and thin with all of my degrees, who provided emotional support, unconditional love, companionship, and a reason to keep going.

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CHAPTER 1

INTRODUCTION

Over the past decade, online learning in educational settings has grown rapidly. As the Internet became widely accessible in the late 1990s, online courses for public high schools became popular. The first online courses provided supplementary and enrichment lessons. Educators, parents, and students quickly showed interest in online courses. As a result, virtual high schools were created that helped personalize learning in which students and families had more control and choices for education. This was due, in part, to the school reform movement to improve public education that occurred across the United States (Roblyer & Elbaum, 2000). With more reliable and higher quality accessibility to technology and the Internet for families and schools, online learning has now become an easily accessible choice for K-12 learners. Virtual schools are enrolling students from kindergarten through 12th grade, thereby increasing the learning opportunities for many children. Currently, many states are taking the lead in using digital learning solutions, such as virtual schools, to help meet key education reform goals. These reform goals include preparing students for the global workforce; strengthening science, technology, engineering, and mathematics (STEM) education; improving teacher effectiveness; and offering new models for turning around low-performing schools (Clark & Oyer, 2012).

According to Davis and Roblyer (2005) the demand for virtual schools appeared to be an integral feature of changes in our society and student population. For example, virtual school administrators indicated that increasing numbers of students are enrolling in virtual schools because they can select features such as self-paced learning, flexibility in scheduling, credit recovery, courses that are not offered locally, and accelerated learning opportunities

(Archambault & Crippen, 2009; Davis & Roblyer, 2005; Rice, 2006). A rationale often used by virtual school administrators addresses accessibility to instruction as well as corrective feedback. A possible benefit of enrollment in a virtual school, expressed by students, is that it matches different learning styles and allows for more one-on-one attention (Hassel & Terrell, 2004).

Although virtual education has been growing steadily in many states, questions regarding its legitimacy and effectiveness in public education have hindered it from being seen as a viable alternative (Roblyer, 2006). K-12 virtual schools have triggered mixed reactions among policy developers, researchers, and practitioners (Salmani-Nodoushan, 2008). Critics of virtual education (Roblyer, 2006) have identified challenges such as curriculum alignment, teacher certification, accreditation, and funding between virtual education and brick-and-mortar schools. Hassel and Terrell (2004), however, indicated that virtual schools are a legitimate and widely accepted educational choice for many K-12 students in the United States. Despite the concerns, virtual education continues to be viewed as an alternative instructional system for students needing flexible schedules or another way to obtain an education.

Of all 50 states, Kansas has the largest number of virtual schools and programs (Watson, Gemin, Ryan, & Wicks, 2009). Kansas offers both virtual schools and virtual programs within schools that must be affiliated with a school district (Kansas Department of Education, 2009). Unfortunately, Kansas does not require specialized teacher preparation at the preservice or professional levels as a prerequisite to teaching online. This situation directly contradicts the recommendations of the International Association for K-12 Online Learning, known as iNACOL, which clearly state that teachers need to be prepared and trained to develop or facilitate virtual courses (iNACOL, 2009). Based on the researcher's experience as an online instructor, teaching online requires rethinking and adapting one's usual approaches to teaching

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and learning. For example, teaching online requires a different set of verbal and nonverbal

presentation skills. Davis and Roblyer (2005) claimed that the way in which a teacher plans the

content of an online course will affect instruction. Even though virtual education is seen as a

viable choice for some students and teachers, there are still questions regarding the use of the

curriculum and how it is implemented in virtual settings. To date, Idaho, Georgia, and Michigan

are the only states that have developed state-level endorsements for online teaching (Davis and

Rose, 2007, p. 8).

In 2009, the researcher conducted a brief, informal survey of preservice teachers'

perceptions of the degree to which they experienced virtual teaching and learning practices as

part of their teacher preparation. The sample consisted of 54 preservice teachers enrolled in two

sections of C&T 301/302, Integration of Technology in the Classroom. Sample participants

were provided information on taking courses as online students and asked questions about that

experience ("if relevant to their pre-college education"). Participants were also asked about

learning how to teach online. Questions focused on learning online pedagogy and instructional

design in online learning environments. Other questions focused on field experiences in K-12

online programs and how online curriculum is designed. Results of the survey revealed that only

five participants had experienced taking a course online and none of those courses were teacher

preparation courses. All of the 54 participants surveyed reported no exposure to learning to

teach online in any teacher preparation course. Only two of the participants surveyed reported

some exposure to virtual education in their teaching methods courses or in field experiences in

teacher preparation courses.

Studies showed the majority of preservice teachers received no exposure to virtual

education in their teaching methods courses or in field experiences (Compton, David, and

Mackey, 2009; Kennedy, 2010). These trends supported the fact that many new teachers are not aware of how to implement curriculum in a virtual environment. Many initial licensure teachers experienced only face-to-face instruction in their teacher education courses, so pertinent practices were not modeled. Research showed that only 1.3% of teacher education programs prepared preservice teachers for teaching in K-12 online learning programs (Kennedy, 2010). Evidence-based practices for virtual education are missing in teacher education courses (Davis, 2009). Surprisingly, although teacher education programs are driven by rigorous national standards in preparing teachers and other school specialists for classrooms, none were found for online teaching for initial licensure (iNACOL 2011; International Society for Technology in Education (ISTE) 2008; Interstate Teacher Assessment and Support Consortium (INTASC), 2011; National Council Accreditation of Teacher Education (NCATE), 2008; Southern Regional Educational Board (SREB), 2006).

Regardless of the setting in which a teacher provides instruction, it is generally accepted that teachers develop concepts of curriculum (Eisner & Valence, 1974; McNeil, 1996). These concepts of curriculum are referred to as curriculum orientations. According to teacher education researchers (Cheung, 2000; McNeil, 1996; Pajares, 1992), curriculum orientations are defined as differing beliefs about what schools should teach, how teachers decide what instruction occurs, and how students should learn. Little research has been conducted regarding teachers' preferences for curriculum orientation in virtual settings, how those preferences might vary across the grade levels taught, how curriculum orientations might change over the career of a teacher, and that some of these changes could be attributed to the virtual teaching environment. Therefore, if teachers do not see the value in the curriculum being implemented within the

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school, they are more likely to change it to fit their preferred curriculum orientation, or to reduce the effectiveness of their implementation strategies (Cheung & Wong, 2002).

It is generally agreed by curriculum theorists (Mahlios, Friedman-Nimz & Peyton, 2007) that the development of curriculum orientations is used to explain what is valued in teaching and learning. The five most cited curriculum orientations originated with Eisner and Vallance (1974) and McNeil (1977), and are identified as (a) Humanism, (b) Academic Rationalist, (c) Cognitive Process, (d) Social Reconstructionist and (e) Behaviorism/Technological. Schwab (1970) promoted the case for a sixth curriculum orientation, Eclectic, which was also included in this study. The sixth orientation's validity was established by scholars (Jenkins, 2006; Mahlios et al, 2007). These six curriculum orientations were the focus for the analysis of data collected in this study.

Overall, studies of curriculum orientation have focused on specific content areas and, thus, are difficult to generalize to all content areas. Curriculum orientations have been studied in a few subjects, such as science, physical education, math, and home economics, but other relevant subjects have been left out. Researchers acknowledged that teachers employ curriculum orientations and should recognize what influences their curriculum decisions (Babin, 1978; Cheung, 2000; McNeil, 1996; Pajares, 1992). Researchers conducting studies of curriculum orientations have been plagued by several problems, such as conflicts between the orientations. One orientation can consist of many different strands, which makes it hard to conceptualize (Eisner & Vallance, 1974; McNeil, 1996). Each teacher has a different idea of what curriculum should focus on for individual development.

Another problem is limited availability of instruments to measure curriculum orientation. Eisner and Vallance (1974) created an instrument that was refined by McNeil (1996) and

modified by Cheung and Wong (2002) and became the Curriculum Orientations Instrument, which is the most widely used and notable instrument. It consists of 30 items representing the five curriculum orientations, using a 6-point Likert scale (Strongly Agree to Strongly Disagree).

The current research, through which the problem of how virtual teachers conceptualize curriculum in virtual settings was explored, is timely because the demand for different educational choices, such as virtual education, increases every school year. This demand for more classes to be taught online leaves a gap in teacher preparation between training for a brick-and-mortar setting and training for an online teaching and learning environment. Professional organizations have developed online teaching and learning standards that are not being implemented properly in all virtual programs (iNACOL, 2011). Teachers often express certain beliefs about the purpose of curriculum, the way it is connected to instruction, and how it relates to teaching and learning outcomes (Jenkins, 2006, 2009; Lichty & Johnson, 2006). Therefore, teachers need to be aware of how each different curriculum will affect their success as a teacher and how to be proficient implementing it in their setting, especially if they are not provided a curriculum but must develop it themselves and include dynamic learning opportunities. Currently, preservice teachers are not taught how to develop a curriculum for virtual courses, use it to help students make academic gains, and align it to state and district standards. Being aware of this and having the training to implement curriculum effectively in a virtual environment is important according to the Association for Supervision and Curriculum Development (ASCD), a membership organization that creates professional development programs and products for educators (ASCD, 2008). For example, according to *Technology Pumps up the Learning Experience*, a report released by ASCD (2008), teachers are going to have to understand how to (a) move technology out of the computer lab, (b) have instant and continuous communication,

and (c) create an enriched learning environment where students are as engaged with technology in learning as they are in their daily lives.

Problem Statement

Samples collected from brick-and-mortar settings have been used in previous research on teachers' beliefs and understanding of curriculum orientations. However, the orientations of teachers working in virtual education settings have yet to be explored. Carroll (1997) stated that curriculum orientations of teachers usually determined if technology would be utilized effectively. Technology use in the classroom was emphasized more than a consideration of how the curriculum could be delivered through the use of technology to enhance learning. This, according to Carroll was what caused teachers' frustration when it came to technology.

Despite the research base on brick-and-mortar teachers, no such base exists on virtual teachers' curriculum orientations. The growth of K-12 virtual education is a fertile area for research. Some of the most current topics being studied in virtual education are (a) teacher preparation programs, (b) quality of virtual programs, (c) performance of part-time virtual students vs. that of full-time virtual students, and (d) how best to implement online learning. There is a paucity of empirical studies on how curriculums are designed for online environments. For-profit companies that direct virtual schools or sell virtual curriculum are currently pushing most of the studies on a significant portion of online learning. Those companies, such as K12, Inc., are doing their own research. These companies can be selective in determining which research is publicized and which studies are kept for internal use. However, the studies are usually not used against them because many virtual programs have a connection to the company's curriculum since it is the exclusive provider of their district curriculum. Empirical studies on the role of curriculum in virtual education, beliefs of teachers in a virtual setting, and values about curriculum are notably absent.

Research Questions

In order to develop a framework for preparing preservice teachers to think about

curriculum in an online teaching environment, this study was structured to address three goals:

(a) identifying curriculum orientations of teachers in virtual settings (for ease of communication,

these teachers will be referred to as "virtual teachers"); (b) virtual teachers' perceptions of the

importance of curriculum in online learning, as well how curriculum orientations are used for

curricular decisions; and (c) the relationship between virtual teachers' and brick-and-mortar

teachers' curriculum orientations. This study used mixed methods of quantitative and qualitative

data.

The goals led to development of the following research questions:

1. What are the curriculum orientations of K-12 public school teachers in virtual
    school settings?

2. In particular, are the curriculum orientations of teachers in virtual school settings
    similar to or different from comparable teachers in brick-and-mortar settings?

3. What are the teachers in virtual settings' perceptions of curriculum in online
    learning?

To answer the research questions, the research was conducted in three phases. Phase One

consisted of contacting administrators from virtual schools. The researcher sent an email about

the need for participants in the study to all virtual-school administrators in Kansas requesting it

be forwarded to the virtual teachers in their programs. Virtual teachers who responded to the

email volunteered to participate.

During Phase Two, two online surveys were administered to the participants. The first

survey, which took approximately 20 minutes to complete, had two parts. In the first part of the

survey, participants received a link to an online survey, which gathered demographic data such

as gender, school level, age, teaching experience, and current teaching assignment. The second part of the first survey offered questions that were linked to specific curriculum orientations as measured by the Modified Curriculum Orientation Instrument (Mahlios et al., 2007). The second survey had two sections. One section forced participants to make a clear choice from six curriculum options. The other section asked participants to select both a curriculum description that closely resembled what they were currently using in their virtual program and the curriculum they would use if they had a choice. It took only approximately five minutes to complete this survey. The data collected from the Forced-Choice (F/C) survey were compared to the Modified Curriculum Orientation Instrument (Modified-COI or MOD-COI) responses for consistency across formats and to avoid centrist response tendencies reported in earlier studies that examined the validity and reliability of the curriculum orientation instrument. Both results were analyzed for the sample pool of all participants. Six teachers were identified out of that sample, one per curriculum orientation, whose responses suggested a single, focused curriculum orientation as evidenced by consistent responses across instrument formats. In the last section of the Forced-Choice survey, participants chose the curriculum currently used in their school. The results from the curriculum currently used were compared to the virtual teachers' earlier responses from the first survey (MOD-COI). Virtual teachers' earlier responses to the MOD-COI, as well as the comparison of those responses with the Forced-Choice survey, were used in order to check validity. All participants were given the option to be contacted later for a follow-up interview. It was the researcher's goal to interview one virtual teacher from each of the six curriculum orientation choices that were higher in one of the six areas using the Modified-COI and the Forced-Choice instrument, and this occurred in Phase Three.

Phase Three consisted of semi-structured interviews in which open-ended questions were asked of 10 participants in order to gain more perspective and insight into curriculum and why a particular orientation was chosen. Unfortunately, the researcher was unable to find six participants who scored higher in one area using the Modified-COI, so 10 participants who displayed higher preferences for one curriculum orientation were used in order to add more depth to the study by exploring different views. The interviews were exploratory in nature, which added depth and dimension to the research questions. The interview questions were created from curriculum orientation characteristics, instructional decisions, and recommended practices. The open-ended questions were designed to provide perceptions of how these teachers reported identifying with a characteristic orientation as well as the teaching path each took to become a virtual teacher. During Phase Three, the interviews were conducted online using Skype. They were scheduled around participants' available time, and lasted up to 40 minutes. Interviews conducted online were recorded and later coded to find common themes. Information obtained during the follow-up interviews was typed and each participant checked the transcript to ensure the narrative was accurate.

Definition of Terms

For the purposes of this study, the following terms are defined:

Academic Rationalist Orientation. Academic rationalist orientation is used to explain the belief that learning should be interdisciplinary and appreciate other fields. The major premise is that the curriculum should aim at developing students' intellectual abilities in those subject areas most worthy of study (Cheung & Wong, 2002).

Behaviorist/Technological Orientation. Behaviorist/Technological orientation is driven by the means in which skills are acquired, rather than by the content of those skills. It uses behavior-learning theory and posits curriculum as a structure for defining, organizing

content, and teaching via behavioral principles (Mahlios et al., 2007).

Brick-and-Mortar. Brick-and-mortar is used to describe a traditional school that is a

freestanding building where teachers and students gather to teach and learn. Instruction is

offered in a classroom where teachers and students interact with each other (Davis, 2009).

Cognitive Process Orientation. Cognitive process orientation stresses the learning process rather

than the curriculum content. In order to help students learn how to learn, high-level

cognitive process skills, particularly transferable skills, are more relevant than knowledge

(Cheung & Wong, 2002).

Curriculum Orientation. Curriculum orientation is defined as teachers' individualized

perspectives on curriculum and how these affect decisions made, designed, and

implemented. It includes different beliefs about what schools should teach, how students

should learn, and how they are assessed (Cheung & Wong, 2002).

Eclectic Orientation. Eclectic orientation is a systemic orientation drawing consciously from the

major curriculum orientations in order to achieve the educational aims sought by local

constituencies (Mahlios et al., 2007).

Face-to-Face (f2f). Face-to-face is a term used to describe the traditional classroom environment

where the teacher and students are in direct contact with each other in the same physical

classroom at the same time (Merriam-Webster Dictionary, 2009).

Humanist Orientation. Humanist orientation is the belief that the student should be the crucial

source of all curricula. The purpose is to provide each student with intrinsically

rewarding experiences that contribute to personal liberation and development (Cheung &

Wong, 2002).

Modified Curriculum Orientation Instrument. The Modified Curriculum Orientation Instrument

is used to describe the instrument used to measure the six identified orientations (Mahlios

et al., 2007).

Schools, Colleges, and Departments of Education (SCDE). SCDE are any universities or

colleges that offer a teacher education program for elementary and secondary education

(NCATE, 2008).

Social Reconstructionist Orientation. Social reconstructionist orientation is the interest in

viewing the school curriculum as a vehicle for facilitating social change. Teachers using

this orientation look for ways to improve society and function within it and to provide

opportunities for students to observe social issues and respond in a way that helps

democracy (Cheung & Wong, 2002).

Virtual Education (VE). VE is defined as

1.   K-12 instruction in a learning environment using the Internet and web-based

technologies where the teachers and students are in different locations at different

times, and curriculum is delivered either synchronously, with students and teacher

communicating at the same time, or asynchronously, with students and teachers

working at different times. It is a form of distance education and often called

online learning. Often, students and teachers have phone conversations, chat

online, or meet virtually; and

2.   Teacher-led instruction that is individualized to the student's needs and takes

place over the Internet using a course management tool, such as Blackboard, to

deliver instruction (iNACOL, 2009).

Virtual Program. A virtual program allows for asynchronous teaching and learning where

students take classes for credit recovery, advance placement (AP), general education, or

remedial assistance. The students and teachers are in different places and never share the

same space for instructional purposes (iNACOL, 2009).

Virtual School. A virtual school, for purposes of this study, is an institution that teaches courses

entirely or primarily through online methods. It is a KSDE-accredited public, online e-

learning school, serving students in grades K-12, intended for students in Kansas. Virtual

schools are educational facilities that do not need to have a physical location but, rather,

are located on the Internet and never close (KSDE, 2009).

Virtual Teacher. A virtual teacher is one who rarely, if ever, sees his/her students and

communicates primarily through writing. Virtual teachers offer instruction through

computers and the Internet (iNACOL, 2008).

Overview

In Chapter 2, pertinent literature is presented and critically analyzed. Chapter 3 focuses

on the methods and procedures employed in the current research. Results are included in

Chapter 4. Discussion, conclusions, and implications for teacher preparation and professional

education are addressed in Chapter 5.

CHAPTER 2

REVIEW OF LITERATURE

The review of literature focuses on the two key areas germane to the current study. The first section reviews virtual education as an emerging field, with particular emphasis placed on preparing teachers to work in virtual environments. In the second section, theory and research relative to curriculum orientations is explored, especially as orientations relate to understanding teachers' conceptions of curriculum in online instruction.

Virtual Education

The pertinent literature focuses on foundational topics such as: (a) the status of virtual education (iNACOL, 2012); (b) advocacy for specialized training in teacher preparation programs (iNACOL, 2012); (c) identifying and recommending particular teacher competencies, practices, and standards (iNACOL, 2012; SREB, 2006); (d) designing online field experiences, and (e) reconceptualizing school district roles (iNACOL, 2008; SREB, 2006).

Status of Virtual Education

Even a brief scan of popular media attests to the fact that virtual education has been growing rapidly since its inception in the late 1960s (iNACOL, 2013). It is generally accepted that virtual education courses, programs, and schools should continue to be a high priority, and that they offer a particularly effective solution for solving a number of persistent problems, such as scarce resources, scheduling issues, and limited space. Programs of online courses are increasingly tailored to the needs of identified groups of students such as homebound, credit recovery, gifted, rural, and so forth (Kennedy & Archambault, 2012). The popularity of online teaching and learning is reflected in steady yearly increases in the number of students enrolling in online courses and programs, and even entire K-12 virtual schools across the United States (including the District of Columbia) (McGrory, 2013, O'Neil, 2006; Watson, Murin, Vashaw,

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Gemin, & Rapp, 2011). These increases in student enrollment have been identified as indicators that school districts are using online, distance, and virtual options to stretch resources as they struggle to meet specialized student needs and, simultaneously, to demonstrate adequate academic progress for all learners.

As an acknowledgement of the importance of online learning skills, there are state-level statues requiring students to take an online course before graduating from high school (e.g. Michigan, Alabama, New Mexico, and Idaho) (Kennedy & Archambault, 2012).

Advocacy for Specialized Teacher Preparation

Research on distance, online, and virtual education has focused primarily on curriculum and program characteristics needed for successful student learning rather than on the ways in which teacher preparation and professional education need to change to accommodate curriculum, learning, and instruction in virtual environments (O'Neil, 2006; Roblyer, 2005). Repeated surveys of teacher education programs have demonstrated persistent failure to offer essential coursework, such as instructional methods pertinent to online pedagogy. In fact, many do not offer any teacher education courses online (Archambault, 2011; Kennedy & Archambault, 2012; iNACOL, 2011). For example, Archambault (2011), using a technological framework developed by Mishra and Koehler (2006), surveyed over 600 K-12 educators who taught online. Participants self-assessed their preparation relative to technology, pedagogy, and content. Overall, K-12 online teachers indicated that they believed they were most prepared in the areas of pedagogy, content, and pedagogical content. They reported that they were least prepared in the areas of technology, including technological pedagogical knowledge, technological content knowledge, and technological pedagogical content knowledge, within existing courses, to address topics of importance to virtual teaching.

Although there have been repeated calls for a profound change to occur in the ways in which preservice teachers are being taught and prepared to teach (iNACOL, 2011), there have been only a few notable attempts. Kennedy and Archambault (2012) found that there are eight states (California, Idaho, Michigan, Nevada, New York, North Carolina, South Carolina, and Utah), where teacher education programs for preservice teachers are actively developing field experiences focusing on virtual teaching. Smith, Clark, and Bloomeyer (2005) reported that current virtual teachers lack the theoretical and practical understanding to teach online and are learning as they go. They identified a handful of universities (Boise State University, Michigan State University, Iowa State University, University of Central Florida, University of South Florida, and University of Florida) that offer specialized instruction on virtual education for preservice or professional teachers (Kennedy & Archambault, 2012).

Until online teaching is required for accreditation by the National Council for Accreditation of Teacher Education (NCATE), it is generally supposed that institutions of higher education will continue to offer courses, concentrations, and/or local certification voluntarily. NCATE (2008) did not state explicitly that preservice teachers need to learn online teaching and learning methods. Standards require only that preservice teachers understand how to integrate technology effectively into the curriculum for educational purposes (ISTE, 2008). The National Educational Association (NEA) (2006) has found that most teacher preparation programs neither include courses about online teaching, nor conduct classes virtually. Therefore, most of the 86,000 new teachers who enter the profession each year do so without online teaching skills.

Just as today's virtual students develop a set of skills that enables them to thrive in the rich atmosphere of cyberspace, successful online teaching also requires a unique skillset and knowledge base. Wood (2005) quoted Blomeyer's observation that, "(there is a) persistent

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opinion that people who have never taught in this medium can jump in and teach a class. . . . A good classroom teacher is not necessarily a good online teacher" (p. 36).

Although much of the knowledge base that supports particular competencies required for effective virtual teachers is anecdotal, there is widespread agreement on many of these skills and competencies. In a comprehensive review of literature, Roblyer and McKenzie (2000) found that many of the factors that make for a successful online instructor are, indeed, the same as those for any successful instructor, for example, good communication and classroom organization skills. However, Cyrs' review of research (1997) identified several areas of unique competence for distance instructors that seem to have been validated in subsequent studies:

- Course planning and organization that capitalize on distance learning strengths and minimize constraints,
- Verbal and nonverbal presentation skills specific to distance learning situations,
- Collaborative work with others to produce effective courses,
- Ability to use questioning strategies, and
- Ability to involve and coordinate student activities among several sites (p. 17).

Easton's (2003) study of skills required by distance learning instructors supported the observations of both Cyrs (1997) and Roblyer and McKenzie (2000). She found that many communication skills required of online instructors are similar to those needed for effective classroom teaching. However, she also found that the online instructor's role requires a paradigm shift in perceptions of instructional time and space, virtual management techniques, and ways of engaging students through virtual communications.

Roblyer and Wiencke (2003, 2004) found that the degree of interaction among participants in distance courses is widely acknowledged to be an indicator of successful learning

experiences; interaction has been found to contribute to both achievement and student satisfaction. To allow measurement and study of interaction in online courses, they identified five elements that contribute to interaction and designed a rubric to assess the degree of each in distance courses. Roblyer (2005) discovered instruments such as this can help teachers learn about the new skills required for virtual teaching and gauge their success in building interactions required for successful courses.

Because of their own limited experience as online learners, preservice teachers may have negative attitudes, misinformation, or misconceptions regarding teaching virtually. In addition to providing opportunities to develop pertinent knowledge and skills, teacher preparation programs need to address these potential barriers systematically (Compton, 2009). Compton (2009) argued that schools/colleges and departments of education (SCDE) can provide systematic opportunities to develop highly effective pedagogical practice if online teaching is modeled and skills are taught before initial licensure.

Unfortunately, few preservice teachers experience models of online teaching and learning in their teaching programs. Therefore, many might not know how to identify highly effective online pedagogy and/or curriculum practices. In addition they are less likely to assess the benefits of teaching and learning in online environments (Archambault, 2011).

Recommended Teacher Competencies, Practices and Standards

A glaring omission from the relevant research literature is how teachers' competencies, practices, and beliefs shape online instruction. In particular, K-12 virtual teaching has been relatively unexplored; the majority of studies on this topic have been conducted in higher education (Crys, 2007). For example, the professional literature abounds with recommendations for online practices; however, there is a paucity of empirical evidence supporting these

recommendations and even less empirically supported research (Kennedy, 2012). In addition to the recommended practices mentioned earlier, one might discover writings regarding the status of virtual teaching, advocacy for virtual education, recommended teacher competence, and standards-based instructional practices. In contrast, pertinent research has tended to focus on aspects of student learning in specific virtual settings, such as online environments (Davis, 2009).

Online teaching requires many of the same elements as teaching face-to-face but incorporates a distinctive set of skills for online teaching (NEA, 2006). It has been proposed that teachers of online classes should be of the highest quality in their content area, well equipped in using technology, and trained and supported for delivering instruction online (iNACOL, 2011). A teacher in a virtual setting has to make adjustments in teaching practices to ensure the students are meeting the standards and objectives of the course. As early as 1977, Cyrs identified several competencies essential for teaching online. These included: (a) learning to manage the online learning environment, (b) preparing content for online learning environments, and (c) leveraging online tools for desirable strategies for communication.

It has been stated that teaching methods, as well as instructional decisions, are different in virtual environments (iNACOL, 2011; ISTE 2008; NEA, 2006; SREB, 2006). Because of these differences, four professional organizations have created checklists and standards for teaching online effectively:

1. Southern Regional Education Board *Essential Principles for High-Quality Online Teaching* (SREB, 2003),

2. iNACOL *National Standards for Quality Online Teaching* (iNACOL, 2008),

3. National Education Association's (NEA) *Guide to Teaching Online*

   Courses (NEA, 2006), and

4. International Society for Technology in Education (ISTE) *What Works in K-12*

   Online Learning (ISTE, 2008).

In 2003, the SREB created a checklist to assess the quality of online teaching to assist states and schools with the selection, training, and evaluation of online teachers. The checklist is divided into four sections:

1. State qualifications assess the teacher's ability to met state standards for teaching, such as teaching credentials and prerequisite technology skills for teaching online;

2. Curriculum and instruction and student assessment measure the teacher's ability to use valid and reliable assessment methods teaching and learning in online courses;

3. Management assesses the teacher's ability to monitor student progress, time, and student interactions; and

4. Evaluation looks at the extent to which the teacher is able to ensure active participation in the online course for student success by following polices and procedures.

In 2008, iNACOL published its *National Standards for Quality Online Teaching*. Its introduction began with a comprehensive review of literature of the existing online teaching-quality standards followed by a cross-reference of standards. Representatives of the iNACOL network then ensured the value of the standards adopted with a survey. As a result of the literature review, iNACOL chose to support Southern Regional Education Board's (SREB) Standards for Quality Online Teaching and Online Teaching Evaluation for State Virtual Schools as a comprehensive set of criteria. The standards identified by SREB were already being used by

16 SREB states; they were the most comprehensive standards found among those reviewed that also included guidelines for other criteria.

The NEA (2006) authored a guide to use for teaching online. It contains a section on the Skills of Online Teachers that should be used for hiring, evaluating, and supporting online teachers. Online teachers are expected to demonstrate and master specific skills and administrators need to be able to recognize them. Some of those skills include:

- Understanding the language of online education;

- Revising and writeing course documents in the course management system (i.e., Blackboard);

- Designing, evaluating, and delivering an online course to appropriate online design and content standards;

- Incorporating Internet resources into course documents;

- Fostering student-to-student discussion and collaboration; and

- Providing appropriate and timely feedback to students and communicating appropriately.

An ISTE report (2008) supported the notion that virtual teaching requires other skills not provided in face-to-face instruction. The authors of the report found that, based on focus and content, virtual teachers' professional development is significantly different from that of teachers in brick-and-mortar settings. Due to the established online teaching standards described above, courses (for learners) are designed by professionals whose expertise is in instructional design or are developed by the teacher responsible for delivering instruction. The teacher who designs his or her own course uses a qualitatively different approach to curriculum development than the instructor who adopts an existing curriculum. Teaching in a virtual environment also exacts a

much higher demand for teachers to create or adapt their own materials, activities, and assessments. It is apparent that virtual and brick-and-mortar teaching require different preparatory experiences and skill sets for teaching and learning (ISTE, 2007).

There is general agreement that an effective classroom teacher does not always make a good virtual teacher. For example, classroom management in a virtual setting is very different than in a brick-and-mortar setting. Discipline is removed, and more time is focused on engaging and working one-on-one with students (ISTE, 2007). Teachers do not receive experience implementing these competencies in brick-and-mortar settings before teaching online. Virtual schools, in general, require more from their teachers than many brick-and-mortar schools. Teachers must be state certified in their content area and have taught several years in a brick-and-mortar setting for experience (ISTE, 2007). According to Davis and Rose (2007), organizations that operate online programs are seeking to recruit new, high-quality staff to meet the demands of teaching online.

In online instruction, the teacher must combine both instructional and subject-area knowledge with a working knowledge of rapidly evolving online tools for communication and collaboration, content management, and assessment. These will come from experience in virtual settings. It is valuable if teachers have learned online before they teach online so that they know what the student is experiencing (Davis & Rose, 2007). Many of the communication skills required in face-to-face teaching are also required in a virtual setting. Easton's (2003) study supported the competences listed by Cyrs (1977), such as course planning and organization, verbal and nonverbal presentation skills specific to distance learning situations, collaborative work with others, and the ability to use questioning strategies. K-12 teachers must be trained to

teach online because data suggest that 10% of all courses will be computer-based, and by 2019, at least 50% of courses will be taught online (Christensen & Horn, 2008).

While the quality of instruction does not change significantly in virtual settings, the requirements to establish instructions may. Teaching and learning practices that focus only on face-to-face instruction must be examined, adapted, or removed if deemed appropriate to ensure quality in the virtual environment. The support experienced by brick-and-mortar teachers may not meet the needs of teachers in virtual settings.

Technology plays a major part in teaching and learning in virtual education. Teachers working in virtual settings use technology frequently and expect students to learn in this formerly unconventional way. Do teachers who frequently use technology for teaching and learning have a certain perspective about curriculum and/or instruction? Are their perspectives similar to or distinct from teachers working in brick-and-mortar settings?

Curriculum Orientations

The term curriculum orientation is used to describe teacher beliefs about how curriculum should be designed and implemented. Curriculum theorists consider the term "orientations" to refer to a teacher's belief system, thought pattern, or philosophy about the curriculum being used (Eisner, 1985; Eisner & Vallance, 1974; McNeil, 1996; Pajeres, 1992; Schubert, 1986). It is thought that orientations influence critical decisions teachers make, such as selecting instructional goals, teaching strategies, and designing learning environments.

Conceptualizing Curriculum Orientations

Many curriculum theorists have not clearly defined a unified model of curriculum orientations; thus, the categories used are not standardized. Curriculum theorists have sometimes labeled and grouped the orientations differently, and this has led to some confusion and contradictions. This also makes it difficult for teachers, administrators, and curriculum

developers to understand, study, and communicate about curriculum orientations (Eisner &
Vallance, 1974; McNeil, 1977; Pinar, 1978; Schubert, 1986; Schwab, 1970).

Above issues aside, there appear to be four generally agreed upon core conceptions that
are most frequently associated with curriculum orientations: (a) Academic Rationalist, (b)
Behavioral/Technological, (c) Social Reconstruction, and (d) Cognitive Process. These are each
described below.

The Academic Rationalist curriculum orientation focuses on traditional academic studies,
such as mathematics, science, and literature. It is the earliest-identified curriculum orientation
and is concerned with providing opportunities to foster students' learning by studying the
important content (Cunningham, Johnson, & Carlson, 1992). What is important is preserving the
knowledge, skills, and values of prior generations; therefore, content should focus on enduring
knowledge. This orientation is teacher-centered, using lectures, questions, readings, and
discussions for instructional purposes. Due to the division of the disciplines, it continues to
receive updates to the academic curriculum incorporating new insights and global changes.
According to Carroll (1997) technology is not pertinent because the content's structure and
process were established prior to the use of electronic technology in education. Academic
Rationalism emphasizes a focus on learning methodology, intellectual stimulation, attitudes, and
values over assessment and specific learning goals.

The Behavioral/Technological (also referred to as Systemic) curriculum orientation is
driven by efficiency and planning. The focus is placed on efficient ways to develop learning
goals and objectives. To be more efficient, academic content is broken into manageable,
measurable goals and objectives. Teachers use specifically designed activities and pedagogy,
such as mastery or learner-controlled instruction to foster mastery of the content, driven by

learning objectives and goals. This curriculum orientation is a product of behavioral psychology, particularly that of B.F. Skinner, in using operant conditioning for desired behaviors. A teacher who uses this curriculum orientation accepts this core principle and acknowledges personalized instructional practices. It is referred to as the anomaly among the other five curriculum orientations, and it is criticized as relying on means rather than on purposes for learning (Vallance, 2001). The technology era and the focus on standards are popularizing this curriculum orientation. Cunningham et al. (1992) contended that the Behavioral/Technological orientation is essentially a technical technique of pretesting, teaching, and retesting. The curriculum allows for social productivity and efficiency in learning predetermined objectives and goals. McNeil (2006) used the term Systemic, as opposed to Technological, to differentiate the curriculum orientation from the technology curriculum. In the high-stakes testing environment in America today, many schools are employing this orientation.

The Social Reconstruction orientation emphasizes solving social issues and improving society. Improving inequalities and injustices in society is a goal for students to demonstrate in this orientation. The purpose of this orientation is to create a new and more just society for all citizens, using education to carry out the mission. Lichty and Johnson (2006) believed social issues have many viewpoints, and this orientation incorporates the concept of multiple perspectives. The aim of Social Reconstruction is to assist students in recognizing socially based issues, identifying effects, and generating solutions that reduce problems and ultimately improve society in general. Students learn to think critically about social issues and to find ways to make a positive impact on the world around them. This orientation is associated with many Progressive educators and, in particular, with the work of John Dewey. The goal of Social Reconstruction is for public schools to facilitate social change and thereby develop the child's

potential and identity. The curriculum orientation is focused on group experiences, developing critical consciousness, and social responsibility to others (McNeil, 1996). The curriculum is concerned with providing groups of students with knowledge and skills to aid them in creating a more democratic society, economy, and government.

The Cognitive Process curriculum orientation enhances the thinking process by developing mental faculties and higher-order thinking skills, such as analysis, evaluation, inference, deduction, and synthesis. The purpose of the orientation is to improve the ability to think effectively. Students learn equally about the process and strategies of learning in context. Exercises that strengthen intellectual processes and cognitive skills are provided to students. A key premise is that skills and abilities are not lost when the information used to facilitate learning is forgotten. Cunningham et al., (1992) suggested, "subject matter is instrumental in the development of these intellectual abilities, but the subject matter is of lesser importance than the development of intellectual power" (p. 4). The development of intellectual skills helps students improve reasoning, problem solving, judgment, and critical skills important to learning within, as well as across, content areas. The focus is on learning to improve cognitive skills for outcomes-based learning, a goal of current educational reform.

A fifth curriculum orientation, Humanist, focuses on developing the whole individual in a learning environment. Humanist curriculum develops students' social and emotional skills in order to become sensitive to humanity and responsible for their decisions. Traditional subjects and facts are taught along with understanding how to learn. Emphasis is placed on the student developing a sense of self-actualization as well as cognitive skills. The underlying theme is cultivating the student's ability for personal growth.

Schwab (1969) developed a curriculum orientation that emphasized a more practical

approach and a focus on using curriculum as a vehicle to address and resolve problems locally. Eclectic is, thus, the sixth curriculum orientation, which promotes the notion of the curriculum being embedded in the local community and school level. It is a systemic orientation that consciously selects educational aims from the major curriculum orientations for achievement with the consideration of the constituents. Using a blend of theoretical ideas, the Eclectic curriculum orientation makes provisions for teachers, parents, and students to influence the curricular goals. Various researchers have argued whether eclecticism represents a valid and distinct orientation (Mahlios et. al., 2010).

Exploring Teachers' Curriculum Orientations

Curriculum orientation studies have been conducted to improve teacher preparation and professional practice by understanding teacher beliefs about how they teach and implement instruction. Research indicates that teachers employ curriculum orientations; however, they might use multiple orientations across their careers and in different teaching environments or to address markedly different student needs. Orientations appear to be an implicit feature of teacher preparation and practice; therefore, teachers might not explicitly be aware of the influence of particular orientations on their curriculum decisions and instructional practices (Babin, 1978; Cheung, 2000; McNeil, 1996; Pajares, 1992).

Overall, studies of curriculum orientation have situated orientations within specific content areas, such as math (Cheung & Wong, 2002), home economics (Cunningham et. al., 1992), science (Cheung & Ng, 2000), and technology (Carroll, 1997). Each study was discipline specific and used uniquely designed instruments whose validity and reliability were limited. In addition, operationalizing orientations within a particular discipline also limited generalizability.

Many of the studies reviewed focused on how teachers become aware of their orientation and evaluated what that meant in terms of effective teaching and learning.

Several researchers (Cheung & Ng, 2002; Cheung & Wong, 2002, as cited in Crummey, 2007; Foil, 2008; Jenkins, 2007; Reding, 2008) attempted to correct the psychometric and construct issues discussed in the instruments developed in the research reviewed above. Cheung and Ng (2002) operationalized the theoretical foundations identified and elaborated by Eisner and Vallance (1974) and McNeil (1996). Their initial instrument identified certain teacher beliefs about how curriculum is designed, the teaching and learning objectives, content, assessment, teaching strategies, and learning activities. Further refined, the Curriculum Orientation Inventory (COI, Cheung & Ng, 2002; Cheung & Wong, 2002) consisted of 30 items representing five curriculum orientations (Humanist, Academic Rationalist, Cognitive Process, Social Reconstructionist, and Behavioral/Technological), and employed an eight-point Likert scale (Strongly Agree to Strongly Disagree) to measure the different curriculum orientations of classroom teachers in Hong Kong. This study provided evidence of strong correlations between orientations and validity data to support their Curriculum Orientation Inventory (COI).

Mahlios (2007) and others have adapted the COI (hereafter referred to as the Modified-COI) for use with educators in the United States. Results of their studies are summarized in the figure below.

	Sample	Sample Size	Curriculum Orientation
Crummey, 2007	Alternative Education Teachers	$n=95$	Social Reconstruction
Foil, 2008	Public School Administrators	$n=889$	Cognitive Processes
Jenkins,	Public School	$n=308$	Gender differences

| 2007 | Teachers (replication of Cheung & Wong (2002)) | | for Humanist and Eclectic (females significantly higher) |
| Reding, 2008 | Catholic Teachers and Administrators | $n=37$ | Humanist and Eclectic |

Figure 1. Curriculum Orientation Inventory (Modified COI) research and key findings

The findings highlighted indicate that there appears to be some indication for particular curriculum orientations by setting and by role (e.g. alternative education, administration). This would suggest that it is timely and pertinent to explore curriculum orientations of educators teaching in virtual learning environments.

Summary

Teachers have curriculum orientations that they may not be aware of consciously. These orientations affect the way teachers implement curriculum due to their own beliefs about teaching. The ways that curriculum orientations are used could vary in different settings (virtual or brick-and-mortar). Curriculum orientations provide an understanding of how teacher's beliefs influence their teaching and how instruction is implemented. Teacher beliefs about curriculum are a well-studied area of research dealing with teachers in brick-and-mortar settings. Teachers develop their attitudes and beliefs about what students should learn and how they should learn at different stages throughout their careers. These beliefs guide specific teaching practices exercised in the classroom. Changes in teacher beliefs also change teaching practices. However, there are no empirical studies that explore curriculum orientations of teachers in virtual settings. In a theoretical discussion regarding the role of technology education, Erikson and Shumway (2006) asserted that technology education is … "grounded in academic rationalism" (p. 27); however, their argument fails to include the possible influence of the educator's curriculum orientation on conceptualizing technology curriculum. Clearly, this is a population whose

orientations need to be explored.

Chapter 3 will provide the methodologies and procedures used in the study.

CHAPTER 3

METHODOLOGY

The purpose of this study was to explore the curriculum orientations of public school K-12 teachers in virtual school settings. More specifically, this study examined virtual teachers' curriculum orientations and compared their orientations to patterns expressed by brick-and-mortar teachers. This chapter contains a description of the research design developed for the study and the related methods and procedures. The following areas are addressed: (a) the research questions; (b) the rationale for the selected research design and methods and assumptions guiding the method decisions; (c) participants; (d) instrumentation used to explore the investigation; and (e) data collection procedures.

Research Questions

When making instructional decisions, teachers should take into consideration the philosophical foundations of the pertinent curriculum as well as their own orientations toward curriculum. Historically, studies of curriculum orientation have relied on samples of teachers in brick-and-mortar environments. These studies have tended to contextualize curriculum orientations within academic disciplines rather than operationalizing orientations across disciplines. The current study was designed to explore the degree to which teachers working in virtual settings, and in a variety of disciplines, expressed consistent orientations towards curriculum. The research explored the following questions:

1. What are the curriculum orientations of K-12 public school teachers in virtual school settings?

2. In particular, are the curriculum orientations of teachers in virtual school settings similar to or different from comparable teachers in brick-and-mortar settings?

3. What are the teachers in virtual settings' perceptions of curriculum in online learning?

Rationale for Research Design

A mixed-methods design was developed to explore the research questions. The rationale for this approach was based on the assumption that a totally quantitative study would not offer the depth of information that can be provided by a more qualitative, interpretive approach. The goal was not only to collect, analyze, and interpret quantifiable data but also to give the data a voice. Choosing a mixed-methods research design utilized what Johnson and Turner (2003) referred to as the "fundamental principle of mixed research" (p. 299). This principle suggests that researchers collect multiple data using different approaches, methods, and strategies. This mixture is likely to result in a design with complementary strengths, which, in turn, also reduces the likelihood of inherent weaknesses (p. 230). A mixed-methods research design is an attempt to legitimize using multiple approaches to answer research questions and allow the researcher a more active role in the research process. The current research design consisted of two phases, a quantitative phase followed by a qualitative phase.

A between-subjects research design was used for the quantitative phase of the study. This research design was used to explore differences between the curriculum orientations of teachers in virtual settings and teachers in brick-and-mortar environments. Dependent samples t-tests were used to examine differences between the two samples. Two measures, adapted from the Curriculum Orientation Inventory (Cheung & Wong, 2002), were employed to assess six identified curriculum orientations (Academic Rationalist, Humanist, Cognitive Process, Social Reconstruction, Behavioral/Technological, and Eclectic). While the content was essentially the

same, each measure used a different format (Likert-type and forced choice) to strengthen the construct and content validity of the assessment. Independent samples *t*-tests were used to explore differences by grade level within the virtual teachers' sample (K-8 and 9-12). Responses to the two instrument formats served as repeated measures (Likert-type and forced choice). To control for possible influences of respondents' age or gender on their expressed orientations, the brick-and-mortar and virtual teacher respondents were matched on these two variables for all analyses.

The qualitative design employed a basic interpretive approach to explore how the teacher participants viewed curriculum in a virtual environment. This qualitative approach was not used to determine cause-and-effect relationships; rather, it used interview prompts and open-ended questions to uncover participants' narratives relative to how they viewed curriculum.

The interview responses were compiled to identify the claims, issues, and advice experienced by the virtual teachers. Data gathered from the interviews were coded and classified into emerging categories using the constant comparative method (Merriam, 2002). This approach was appropriate for the study due to the data collected and the infancy of virtual education.

Participants

Two samples were used in the current study. The primary participants under investigation were K-12 teachers in virtual settings in Kansas who were teaching either full- or part-time in a Kansas public school (grades K-12 were considered). The target population was teachers in virtual programs in Kansas. Only virtual teachers who responded to the invitational email were included in the sample. A sample size of 60 teachers was desired for this study, and 47 responded to the survey. Therefore, the sample consisted of 47 full-time and part-time

teachers employed in virtual programs. Teachers working in credit-recovery programs that used web-based courses were not included in this study.

Participants were recruited through an email sent to all directors of virtual programs in Kansas. The researcher first contacted the state's listed primary contact for virtual education as identified in the Kansas State Department of Education's electronic directory of all directors of virtual programs in the state. An email was sent to a personal-contact director of a virtual program that had the email addresses and connections of all the directors of virtual programs in Kansas. This director then forwarded the invitational email to all other directors in Kansas, provided an introduction of the researcher, and solicited their participation. Directors agreed to forward the invitational email to all of the virtual teachers they supervised. Unfortunately, the state does not maintain a complete listing of all teachers employed in virtual education programs, so a total number of virtual teachers could not be determined to calculate a participation rate. In addition, an existing database of 247 brick-and-mortar teachers was used for comparisons to the responses of the teachers employed in virtual settings.

Participants were aware that their participation in the study was voluntary with minimal risk and that they could be contacted for additional or follow-up information. The researcher collected demographic information, such as level of education, age, heritage, gender, teaching experience in online settings, and grade taught at the time of the study.

All participants had completed at least one year of virtual/online teaching. Eighty-seven percent of participants had six or more years of overall teaching experience (virtual and brick-and-mortar). The modal age of participants was 31-45 (51.06%) and the primary gender was female (80.85%).

The sample of the 247 brick-and-mortar teachers' age was 23-30 (54.84%) and the primary gender was female (81.85%). When the brick-and-mortar sample was matched to the virtual teachers on age and gender, the numbers changed. The matched samples majority age was 31-45 (46.81%) and the majority gender was female (80.85%).

Participants completed an online survey that was available for three weeks from the date of the emailed invitation. Ten virtual teachers from the population who responded to both curriculum orientation instruments were interviewed in depth to explore their perceptions of the curriculum used in their virtual education program, as well as to explore in depth their curriculum orientations and their career paths.

Instrumentation

Researchers have acknowledged that teachers employ curriculum orientations and should recognize what influences their curriculum decisions (Babin, 1978; Cheung, 2000; McNeil, 1996). However, there is a scarcity of validated instruments that measure curriculum orientations. The most widely used and notable instrument is the Curriculum Orientation Instrument (COI) developed by Cheung and Wong (2002), based on the writings of Eisner and Vallance (1974) and McNeil (1996) that contained 30 items measuring five curriculum orientations. As mentioned earlier, studies of curriculum orientation have tended to focus orientations within specific content areas. Therefore, it is difficult to generalize results to the population of teachers.

To assess the curriculum orientations of virtual teachers, the researcher utilized three instruments and a semi-structured interview protocol. The first instrument used was the Modified-Curriculum Orientation Inventory (M-COI) (Mahlios et al., 2007). This instrument, based on the initial inventory developed by Cheung and Wong (2002), consists of 36 items, which include a sixth orientation, Eclectic by Schwab (1978), for each of the six curriculum

orientations mentioned earlier. The validity and reliability of the Modified-COI has been

established by Cheung and Wong (2002) and Mahlios et al. (2007). Similar to the Cheung and

Wong scale on which it is based, it employs a Likert-type scale; however, it uses a 5-point scale.

The scale's meaning has also been modified from "Does Not Represent My Views" to

"Represents My Views Exactly." The Likert-type scale is thought to be more appropriate for the

task, and yields interval level data, which allows for more powerful quantitative analyses.

Cheung and Wong determined the Curriculum Orientation Instrument was effective for

measuring the curriculum orientations of teachers.

The items and subscales of the M-COI (Mahlios, et al., 2007) are shown in Appendix A.

This was the instrument used for the study and was found to be a valid and reliable instrument

for measuring curriculum orientations. A sample of the types of items is listed below in Figure 2

with the curriculum orientation listed.

The researcher developed a second instrument (Forced-Choice with Descriptors

Instrument) to reduce possible influences of measurement issues identified in previous construct

validation studies (Mahlios et al., 2007). This instrument employed thumbnail sketches to

describe the five core components of each orientation:

1. Aims of curriculum,

2. Concepts of curriculum,

3. Instructional expertise,

4. Instructional methods, and

5. Assessment.

Question	1= Does not represent my view at all	2= Minimally represents my views	3= Represents my views somewhat	4= Represents my views fairly well	5= Represents my views exactly
16. Curriculum should stress refinement of students' intellectual abilities (Academic Rationalist)					
28. Curriculum design should start with stating learning objectives (Behavioral/ Technological)					
17. Students learn best when permitted to analyze, investigate, and evaluate authentic societal problems. (Social Reconstruction)					
19. Students interests and needs should be the organizing center of the curriculum (Humanist)					
29. A central goal of the curriculum should be students' attainment of practical reasoning. (Cognitive Process)					
18. Curriculum should require teachers to teach thinking skills systematically. (Eclectic)					

Figure 2. Modified-COI Representation (Mahlios et al., 2007; Cheung & Wong, 2002)

Respondents numbered each group of terms (e.g. "aims of curriculum") to create a profile.

Results were compared to the data collected from the Modified-COI to promote the development

of clear profiles, which had been limited when the Likert-type format was used. The second

instrument contained descriptors of curriculum using language from each of the six curriculum

orientations. The descriptors were used to describe the curriculum, and respondents chose the

one used in their virtual school/program. The respondent also chose an ideal curriculum from

the curriculum descriptors. The two quantitative surveys were used to gather responses to

predetermined open-ended interview questions about curriculum orientations. The complete

items for the Forced-Choice with Descriptors Instrument can be seen in Appendix B. Figure 3,

below is an example of the instrument.

Forced-Choice Section

Please number the set of phrases 1-6 that most describes your definition of curriculum. Choose "1" if the phrase is most like your view. Choose "2" if the phase is next, "4" to the next, and so on. Choose "6" if the phrase is least like your view. Each phrase should have a different number selection. Rank reach horizontal row.						
Provide students with the knowledge, skills, and values within the context of the major academic disciplines (Academic Rationalist) _____	Enhance each student's cognitive and affective development by emphasizing personal meaning (Cognitive Process) _____	Develop and nurture the full range of thinking and learning processes such as memorizing, hypothesizing, problem solving, analyzing, synthesizing, and evaluating (Humanist) _____	Foster students' critically ability to analyze social problems and to provide them with the skills, values, and knowledge to that lead to generating viable solutions (Social Reconstruction) _____	Driven by standards, benchmarks, and objectives (Behavioral/ Technological) _____	Practical reasoning within the local context and its relevant historic, demographic, political, social, and economic characteristics (Eclectic) _____	Total ____

Descriptors Section

> 1. Please review each of the 6 descriptions carefully and **choose** the one that **BEST DESCRIBES** the curriculum you are using right now. Place "1" next to the description.
> 2. Now review each of the 6 descriptions again, assuming no limitations. **Choose ONE** that best represents an **IDEAL** curriculum. Place "2" next to the description.
>
> **Curriculum A (Academic Rationalist)**
> The curriculum consists mainly of traditional academic subject matter, such as mathematics, science, literacy and so on. Its purpose is to provide students with the knowledge, skills, and values within the context of the major academic disciplines (e.g. mathematics, science, history, etc.). In order to implement this curriculum well, teachers need a deep understanding of their academic discipline. Teachers select and employ instructional strategies pertinent to specific disciplines. Assessment is used to determine the extent to which students have acquired content knowledge and discipline-based thinking.

Figure 3. Forced-Choice with Descriptors

Participants responded to semi-structured interview questions concerning their experiences as teachers in virtual settings and the training received to teach in this environment.

Data Collection Procedures

In addition to the quantitative methods, qualitative methods were used for this study to describe the curriculum views of virtual teachers and how curriculum orientations influence their instructional decision-making. Semi-structured interviews were conducted. The main purpose of the interviews was both to gain a better understanding of how teachers in virtual settings view curriculum and to explore possible orientation-based differences relative to how curriculum was implemented online. The items used for the semi-structured interviews can be found in Appendix C.

Examples of interview questions are as follows:

1. Tell me about a time when you modified the curriculum for the student(s) or to fit your individual teaching needs.

2. How do you see your curriculum orientation being an advantage in the virtual environment?

3. I would like to know your story on how you became a virtual teacher.

4. Tell me about your teacher preparation-training program for teaching online.

Interview data were collected using SKYPE and a pen with audio recording capabilities. The specialized pen was employed to record the interview for later transcription. These interviews allowed for more in-depth collection of information that might otherwise be missed in a purely quantitative study (Yin, 2003b). Data sources for the qualitative data included transcripts of SKYPE sessions and transcripts of the audio files from the recordable pen. The collection of information from a variety of sources allowed for triangulation of the data for a better understanding of the context in which the virtual teachers process their curriculum

thoughts. All interviews were then coded and summarized into developed codes by the researcher.

<div align="center">**Phases**</div>

To answer the research questions, the research was conducted in three phases. Each of the phases had a specific goal in order to gather and evaluate the data from the virtual teachers. The phases consisted of: Phase 1- finding virtual teachers in Kansas, Phase 2- administering the instruments, and Phase 3- conducting the interviews.

Phase 1

During this phase, the researcher solicited virtual programs in Kansas to gain access to their teachers. A search for virtual programs in Kansas was conducted using the State Department of Education's website in order to find out the number of virtual programs in Kansas. During the 2010-2011 school year, there were 47 state-approved virtual programs. The researcher contacted each program and spoke either to the director or to a staff member of the program to inquire about the virtual services offered to students. Out of those 47 approved programs, only 35 of them were functioning as a true K-12 virtual program without using credit recovery or adult learners as a criterion for being online.

When contacting the directors of the program, the researcher spoke to a director who was willing to assist with the research. This director was in regular contact with all other directors of virtual programs in Kansas and agreed to send an email to them requesting assistance. An email was drafted which explained the study and risk and asked for participation from virtual teachers in order to add to the knowledge base of virtual programs in Kansas. The email was sent to all directors on a Monday morning, with hopes that the email from another director would get their attention and response. Sending the email on a Monday was important because most directors are in the office on that day and usually answer emails from the weekend, but the new email

from a colleague would be at the top of their email box. This would be a better way to get exposure and provide a better chance that the email would be opened. The instructions for the virtual program directors provided a summary of the research and asked them to forward the email to all of their virtual teachers for participation in the study.

Due to a low response rate to the initial email, a reminder email was drafted asking the virtual teachers to participate in the study and was sent to all directors to forward again to their virtual teachers. The second email received more participation from virtual teachers and included virtual schools and programs that had not responded to the first email. The reminder email was very effective in attracting more virtual teachers who were interested in participating in the study.

Phase 2

Phase 2 initiated two surveys for the participants in order to gather data for the research questions. The researcher used two online surveys: M-COI (Mahlios et al., 2007) and a Forced-Choice with Descriptors version of the M-COI developed by the researcher. The first survey was originally designed for a paper format. However, the researcher converted it for use online using a Likert-scale. The second survey contained two parts: key phrases with a numbering system, and descriptors of each orientation using multiple-choice. Both online surveys were created in Qualtrics, which is online survey software.

Each of the 47 participants was provided a link to the first survey. The survey included a demographic information section as well as an invitation to participate in the additional research phases. The survey analytics report showed participants took up to 20 minutes to complete the survey. To give the participants enough time to respond, the link was active for four weeks before it closed. After the survey link was closed, the researcher scored each survey by sorting

items into orientation categories and summing the pertinent item scores. Thus, each

respondent's orientation profile consisted of a total, mean, and standard deviation for each of the

six orientation categories. Unfortunately, for many of the respondents, no dominant orientation

preference was revealed. This might have been, at least in part, due to the instrument's Likert-

type format. For example, some participants' preferences were identical for as many as three

orientations. Each participant received a code(s) (AR- Academic Rationalist, CP- Cognitive

Process, SR- Social Reconstruction, H- Humanist, B/T- Behavioral/Technological, or E-Eclectic)

according to the number of times each orientation was chosen using the Modified-COI. This

assisted the researcher in placing participant choices into six different categories for coding data

later. After all initial surveys were coded and ranked to find the most preferred score, the

participants with the highest preferences in one particular curriculum orientation were chosen to

participate in another survey if "future communication" had been selected in the survey.

Fortunately, all 47 participants agreed to be contacted for further research.

 After coding all initial surveys, a second survey link for the Forced-Choice with

Descriptors instrument was sent to all participants to account for the issues described above, in

hopes that the second instrument would reveal preferred orientations more clearly. Out of the

original pool of 47 participants, 20 individuals responded to the second survey, which took no

more than seven minutes to complete using the survey analytics report. The first part of this

survey attempted to force a favored curriculum orientation choice on the participant. This survey

attempted to find a specific type of measure where participants compared options and chose the

one that is most preferred. One of the six orientations showed a dominant orientation using a

numbering system. In the second part of this survey, Descriptors, the participant chose the

current curriculum of the virtual school/program and his or her "ideal curriculum" from the six

curriculum descriptions, each one reflecting one orientation. The link for this survey was available for two weeks before a reminder email was sent out in hopes of gaining more participants. An additional week was added, making it available for a total of three weeks. The Forced-Choice part of the survey allowed the researcher to code each of the participants into one or two preferred curriculum orientations. The second part provided a way to explore the choices of curriculum written from a particular orientation's point of view. All participants' information was categorized using only the preferred Forced-Choice selections. The data collected from the Forced-Choice with Descriptors survey were compared to the responses from the M-COI to avoid response tendencies or bias responses reported in earlier studies examining the validity and reliability of the M-COI. The descriptor choices were used during a different part of the study. The validity of each part of the survey was established by researchers assisting with the Modified-COI, administering it as a pilot in a graduate course, and administering the survey to other researchers who rated it, provided their opinion about whether the questions were useful, and measured the construct of curriculum orientation.

Phase 3

In Phase 3, the data collected from both online surveys were used to choose a pool of preferred participants for interviews. Ten participants from Phase 2 were selected and confirmed the invitation for an in-depth interview lasting no more than forty minutes. The participants were selected based on their strong preference for one curriculum orientation out of the six orientations. Each of the six curriculum orientations was represented by at least one participant. Three of the curriculum orientations (Humanist, Cognitive Process, and Behavioral/Technological) had more than one participant who was interviewed. The additional

participants interviewed for the three orientations provided additional perspectives of the curriculum in online learning.

Participants were contacted individually through email to set up a convenient time for the interview. Two participants conducted the interviews within their classroom during a planning period, and others were interviewed at their homes, where it was comfortable, during the week and on the weekend. Interviews were conducted online using SKYPE, a free online videoconferencing software. The interviews used open-ended questions and were recorded with a pen with recording capability. The open-ended questions provided perceptions of how this group of participants reported developing particular curriculum orientations as well as the path to teaching in a virtual setting. Interviews were all coded to find common themes between the participants. These themes assisted the researcher in answering the third research question regarding the perceptions of curriculum in online settings.

Interviews

At the start of the interview, participants were provided a brief introduction to develop a level of comfort with the researcher. Participants were reminded of the purpose of the study and of their consent to participate by completing the online surveys. Participants were told that, if needed, the interview could be stopped at any time and they were asked for any questions or comments before beginning. Open-ended questions were asked of the participants, with a chance for the researcher to ask follow-up questions based on the responses or to continue to the next question. All participants were asked for permission to be recorded and told that all conversations were confidential. Participants were informed that their interview transcript would be provided for member checking of facts. The researcher emailed each participant his or her

descriptor portion of the Forced-Choice with Descriptors survey in advance of the interview for discussion during the interview.

Interview Questions

Each participant had a unique story of how he or she got into virtual education. All the stories described unique paths. Each participant's story was told, using pseudonyms for confidentiality. The research questions asked participants how they got started in virtual education. Answers ranged from the need for a program for a full-time science teacher to service students in an educational service center to a parent wanting the opportunity to teach online because teaching in a brick-and-mortar classroom was not a desirable option. For example,

> Well, I started off in traditional high school education, teaching the sciences, chemistry, and physics. From that experience, I started working a lot with underserved students. This was a total change in my philosophy, because I was hard-core college prep. Then it started coming to light that there were a lot of underserved areas. The school could not afford a full-time teacher and I was qualified so that's how I was introduced to virtual education.

Questions were asked about the current curriculum used in the virtual program and the curriculum design. Other questions referred to the teacher's experience with the curriculum in regard to learning. One participant reported, "One student said she really liked switching to this new math book, because she could watch the videos and was kinda like watching somebody in the classroom and stuff like that." Most teachers stated that virtual training was during a short training or they self-taught themselves. However, one teacher received training through the Learning Management System (LMS), Blackboard, which led to a certification for online teaching. There was no training received from any higher education institution.

Virtual teachers shared stories of how the curriculum was modified for students, such as providing alternative assignments, offering other resources to assist students with assignments, and breaking down assignments into smaller parts for struggling students. Teachers discussed

their curriculum orientations and how they are an advantage or disadvantage for the current curriculum in the virtual program. One teacher who chose Humanist for her curriculum orientation responded to that question with great detail: "You do get so much more one-on-one time with the kids. You get to work one-on-one with a kid. It's individual time. The disadvantage is not having the face-to-face time." Another response to the question was, "Don't let handwriting interfere with your student's ability to learn. I have no qualms about changing the curriculum to meet my students' needs." Only one virtual teacher was not able to modify the curriculum for teaching and learning due to the scripted curriculum that teachers were required to follow. Other interview questions dealt with the curriculum orientation of the teacher and the curriculum he or she believed the virtual program uses.

Summary

In the current study, a mixed-methods design was used to explore and answer the three research questions.

1. What are the curriculum orientations of K-12 public school teachers in virtual school settings?

2. In particular, are the curriculum orientations of teachers in virtual school settings similar to or different from comparable teachers in brick-and-mortar settings?

3. What are the teachers in virtual settings' perceptions of curriculum in online learning?

Quantitative data were used for Question 1 to identify the curriculum orientation of virtual teachers with an online survey. The director of each virtual program accredited by the state served as the source of names of prospective teacher participants. Participants were solicited using the director of the virtual program. Quantitative methods were used for Question 2 to compare virtual teachers and brick-and-mortar teachers. Existing brick-and-mortar teacher data

were used to compare with the virtual teachers' responses to Question 1. Using interviews to explore the perceptions of virtual teachers used qualitative methods for Question 3. The participants who agreed to be interviewed were chosen from their answers to Question 1. Each of the six curriculum orientations was represented in the interviews. Chapter 4 provides the detailed results.

CHAPTER 4

RESULTS

Limited studies exist that explore curriculum orientations of teachers in virtual K-12 settings. The central purpose of this study was to explore the curriculum orientations of virtual teachers and compare them to those of teachers in brick-and-mortar settings. The study examined the curriculum orientations identified by the virtual teachers, using the Modified-COI and, specifically, the perception of curriculum in online learning, including a comparison with previous data for teachers identified in brick-and-mortar settings.

In this chapter, two types of results are provided. First, descriptive statistics of the teachers, including demographics, educational setting, and teaching experience, are presented to identify the population in the study. Second, the results of the exploratory data and comparative data are presented, as the study's research questions were addressed using semi-structured interviews. Initial review of studies on the curriculum orientations of teachers in virtual settings raised an expectation that virtual teachers' perceptions of curriculums would vary from teachers in brick-and-mortar settings. This was due to nonexistent studies in this area. Even a quick scan of the extant literature confirms that curriculum orientations are well defined in the literature for teachers in brick-and-mortar schools. What is absent from the research are investigations of the curriculum orientations of teachers in virtual programs. The extent to which teachers in virtual settings identify with the curriculum orientation of the virtual curriculum is not known. The specific research questions guiding this research were:

1. What are the curriculum orientations of K-12 public school teachers in virtual school settings?

2. In particular, are the curriculum orientations of teachers in virtual school settings similar to or different from comparable teachers in brick-and-mortar settings?

3. What are the teachers in virtual settings' perceptions of curriculum in online learning?

Descriptive Statistics

This research study provides results and data collected from 47 participating virtual teachers. In Table 1, the study population is described, including data provided by the sample under study as well as the comparison sample of teachers working in brick-and-mortar settings. Included in Table 1 are data pertaining to each of the two samples: (a) number of participants, (b) levels of education, (c) age, (d) heritage, (f) gender, and (g) role. Results indicate similar distributions of identified heritage and gender for virtual teachers when compared to brick-and-mortar teachers; however, some differences are also apparent. Most notable is the disparity between the age distributions in the current study participants (chronological age 31-45, or 51.06% of the total virtual teacher sample) versus the brick-and-mortar sample (chronological age 23-30 or 54.84% of the total brick-and-mortar teacher sample). Although the virtual-teacher sample's age cluster suggests that, as a group, they are somewhat older than the brick-and-mortar sample, the age distribution displays a similar pattern in the nearly half of each sample cluster within a single decade. The participants in the study and from the previous data describe themselves, for the most part, as female and Caucasian. The modal level of education is a master's degree. It should be noted that, overall, the comparison sample displays more diversity (i.e., teachers, administrators, and other school personnel). However, the matched comparison sample includes only teachers. It is the opinion of the researcher that the two groups are adequately similar to conduct the full analyses.

Table 1

Demographic Information for Samples Used in Modified COI Analyses.

	Virtual Sample	Matched Brick and Mortar Sample	Total Brick and Mortar Sample
Total *n*	47	47	247
Level of Education			
Bachelor's	7 (14.89%)	0 (0.00%)	0 (0.00%)
Master's	39 (82.98%)	33 (70.21%)	182 (73.39%)
Doctorate	1 (2.13%)	1 (2.13%)	33 (13.31%)
Endorsement	0 (0.00%)	12 (25.23%)	27 (10.89%)
Missing	0 (0.00%)	1 (2.13%)	6 (2.42%)
Age			
22 or younger	0 (0.00%)	0 (0.00%)	10 (4.03%)
23-30	5 (10.64%)	8 (17.02%)	136 (54.84%)
31-45	24 (51.06%)	22 (46.81%)	61 (24.60%)
46-65	18 (38.30%)	17 (36.17%)	38 (15.32%)
66 or older	0 (0.00%)	(0.00%)	1 (0.40%)
Missing	0 (0.00%)	(0.00%)	2 (0.81%)
Heritage			
Caucasian	44 (93.62%)	39 (82.98%)	204 (82.26%)
Latino/Latina	2 (4.26%)	2 (4.26%)	8 (3.23%)
Native American	0 (0.00%)	0 (0.00%)	1 (0.40%)
African American	0 (0.00%)	1 (2.13%)	3 (1.21%)
Asian American	0 (0.00%)	1 (2.13%)	7 (2.82%)
Other	1 (2.13%)	4 (8.51%)	22 (8.87%)
Missing	0 (0.00%)	0 (0.00%)	3 (1.21%)
Gender			
Male	9 (19.15%)	9 (19.15%)	43 (17.34%)
Female	38 (80.85%)	38 (80.85%)	203 (81.85%)
Missing	0 (0.00%)	0 (0.00%)	2 (0.81%)
Type of Teacher			
Teacher	47 (100%)	47 (100%)	163 (65.73%)
Administrator	0 (0.00%)	0 (0.00%)	8 (3.23%)
Other	0 (0.00%)	0 (0.00%)	45 (18.15%)
Missing	0 (0.00%)	0 (0.00%)	32 (12.90%)

Table 2 includes descriptive analyses of virtual teachers using demographic information relative to teaching experience, online teaching experience, and current virtual teaching position. As shown in Table 2, 87.23% of the participants reported overall teaching experience of six years or more, and 43.48% of the participants reported six or more years of virtual teaching experience. The majority (38.30%) of the participants indicated that they are employed as full-time virtual teachers.

Table 2

Demographic Teaching Information for Virtual Teachers

	n (percentage)
Overall Teaching Experience	
1 to 5 years	6 (12.77%)
6 or more years	41 (87.23%)
K-12 Virtual/Online Teaching Experience	
0 to 1 years	7 (15.22%)
2 to 4 years	19 (41.30%)
5 or more years	20 (43.48%)
Current Virtual/Online Teaching Assignment	
Part-Time Virtual	13 (27.66%)
Full-Time Virtual	18 (38.30%)
Full-Time Brick & Mortar, Part-Time Virtual	9 (19.15%)
Blended	2 (4.26%)
Part-Time Virtual & Other in Education	3 (6.38%)
Part-Time Virtual & Other outside Education	0 (0.00%)
Other	2 (4.26%)

Table 3 includes information concerning the distribution of the virtual teacher sample by Kansas school districts. A scan of the data reveals that the 47 participants represent 16 school districts. There was more than one participant in only five of the 16 districts. There are 293 districts in Kansas and 47 districts have virtual schools/programs.

Table 3

Kansas School Districts of the virtual teacher participants

School Districts	n (%)
District A	6 (12.8%)
District B	1 (2.1%)
District C	1 (2.1%)
District D	1 (2.1%)
District E	2 (4.3%)
District F	1 (2.1%)
District G	5 (10.6%)
District H	1 (2.1%)
District I	1 (2.1%)
District J	1 (2.1%)
District K	12 (25.5%)
District L	1 (2.1%)
District M	1 (2.1%)
District N	11 (23.4%)
District O	1 (2.1%)
District P	1 (2.1%)

*Actual names of districts have been changed for confidentiality

Question One Results

Question 1: What are the curriculum orientations of teachers in virtual settings?

To address this question, measures of central tendency were calculated for the sample of virtual teachers (N=47) for each of the six orientations: (a) Academic Rationalist, (b) Humanist, (c) Cognitive Process, (d) Social Reconstruction, (e) Behavioral/Technological, and (f) Eclectic, using the online Modified-Curriculum Orientation Instrument (Mahlios et. al, 2007). The six curriculum orientations' mean scores are shown in Table 4. Means range from 2.96 to 4.07 (highest possible score= 5).

Table 4

Mean Scores for the Six Curriculum Orientations of K-12 Virtual Teachers (n = 47)

	Academic Rationalist	Humanist	Cognitive Process	Social Reconstruction	Behavioral/ Technological	Eclectic
Mean (SD)	3.51 (.57)	3.60 (.67)	4.07 (.48)	2.96 (.84)	4.00 (.50)	3.63 (.60)
Reliability	.73	.80	.73	.90	.77	.79
Skewness	.08	-.23	-.15	.35	-.11	.04
Kurtosis	.43	.18	-.59	-.43	-.56	-.68

Distributions of mean scores across orientations were further analyzed using simple correlations and independent samples *t*-tests. Mean scores for the curriculum orientations were based on responses to the online Modified-COI using a Likert-scale from 1 (Does not represent my views) to 5 (Represents my views exactly). Cognitive Process was significantly favored for virtual teachers while Social Reconstruction was the least chosen orientation.

In order to identify the curriculum orientations each of the 47 participants chose, using the Modified-COI along with the number of participants each of the six orientations represented, a frequency table was created. It was difficult to categorize participant scores because approximately 20% of the participants had more than two scores that were equal on the Modified-COI. One participant had the same score for four curriculum orientations. In order to standardize the scores, the raw scores were used to create *z*-scores. Table 5 uses the z-scores, which reveal that eleven participants representing Academic Rationalist, Behavioral/Technological, and Humanist orientations chose three curriculum orientations equally.

Table 5

Scores (z-scores) for all Virtual Teachers on Modified-COI

ID	Highest Rated	Acad. Rat.	Hum.	Cog.	Soc. Rec.	Beh.	Ecl.
VT1	Beh.	-0.32	-0.15	-0.84	-0.74	**0.33**	-0.77
VT2	Beh.	-0.03	0.10	0.20	0.65	**0.66**	-0.49
VT3	Acad. Rat.	**0.56**	-0.15	0.20	-0.54	0.00	0.34
VT4	Beh.	0.27	0.60	0.89	-0.94	**1.33**	1.17
VT5	Cog.	-0.91	0.10	**1.23**	-0.15	-0.33	-0.49
VT6	Acad. Rat.	**0.56**	-0.15	-0.49	0.05	-0.33	0.34
VT7	Hum.	-1.50	**0.35**	-1.52	0.05	-2.32	0.06
VT8	Soc. Rec.	0.27	0.10	-0.49	**1.04**	0.00	0.34
VT9	Acad. Rat.	**2.63**	1.60	0.89	1.83	-1.32	1.45
VT10	Acad. Rat.	**-0.61**	-0.90	-0.84	-0.74	-0.66	-1.33
VT11	Beh.	-0.32	-2.39	-1.87	-1.14	**0.00**	-1.33
VT12	Acad. Rat.	**1.74**	0.85	1.58	1.44	1.66	1.73
VT13	Hum.	0.27	**0.35**	0.20	-0.15	-0.99	-0.49
VT14	Beh.	-0.03	-1.39	-1.18	-1.54	**0.99**	-1.47
VT15	Hum.	-0.61	**0.85**	-0.49	0.84	-0.99	-0.49
VT16	Beh.	-0.32	-1.39	-1.52	-1.14	**0.00**	-0.77
VT17	Ecl.	-0.03	0.10	-0.15	0.45	-0.33	**0.62**
VT18	Ecl.	-0.32	-1.14	-1.18	-0.35	-0.66	**0.06**
VT19	Cog.	-1.20	0.10	**0.20**	-0.35	0.00	-0.22
VT20	Beh.	0.56	0.85	0.54	0.65	**1.33**	0.62
VT21	Cog.	-2.09	-0.65	**-0.49**	-0.94	-1.65	-1.33
VT22	Beh.	-0.03	0.10	0.20	0.45	**0.99**	0.34
VT23	Cog.	-0.03	-0.40	**0.89**	0.05	0.00	-0.22
VT24	Cog.	0.56	0.10	**1.92**	1.04	1.59	0.06
VT25	Hum.	1.15	**1.84**	1.58	1.44	0.33	1.73
VT26	Hum.	-0.91	**-0.15**	-1.18	-0.74	-1.32	-0.49
VT27	Hum.	-2.38	**1.35**	0.20	0.45	-0.33	-0.22
VT28	Acad. Rat.	**0.86**	-0.90	-0.49	-0.54	0.33	-1.05
VT29	Acad. Rat.	**0.27**	-1.64	-1.52	-1.54	-0.66	-1.05
VT30	Acad. Rat.	**-0.91**	-2.39	-2.21	-1.93	-1.65	-2.16
VT31	Hum.	-1.20	**0.10**	-0.15	-0.54	-0.99	-1.33
VT32	Hum.	-0.91	**1.35**	1.23	-1.54	0.00	0.34
VT33	Beh.	0.56	-0.40	-0.49	1.04	**1.66**	0.34
VT34	Ecl.	0.27	-0.65	-0.49	-0.35	-0.99	**0.90**
VT35	Acad. Rat.	**1.45**	0.85	1.23	-0.74	0.66	0.62
VT36	Hum.	-1.20	**1.84**	0.54	-0.54	0.33	1.73
VT37	Soc. Rec.	1.45	-0.15	-0.15	**2.03**	1.33	1.73

(continued)

Table 5: *Scores (z-scores) for all Virtual Teachers on Modified-COI* (continued)

ID	Highest Rated	Acad. Rat.	Hum.	Cog.	Soc. Rec.	Beh.	Ecl.
VT38	Acad. Rat.	**1.74**	0.10	1.58	0.84	1.66	1.17
VT39	Hum.	-0.91	**1.84**	0.89	1.64	-1.65	0.62
VT40	Soc. Rec.	0.27	1.10	1.23	**2.23**	1.33	1.45
VT41	Acad. Rat.	**1.15**	0.60	0.54	-0.54	0.99	0.06
VT42	Beh.	0.27	-0.40	0.20	-0.94	**0.66**	-1.05
VT43	Hum.	0.56	**0.60**	0.20	-0.15	-0.66	0.06
VT44	Ecl.	0.27	-0.15	0.54	0.25	0.00	**1.17**
VT45	Beh.	-0.32	-0.40	-1.18	0.25	**0.33**	-0.22
VT46	Soc. Rec.	0.27	-0.90	0.20	**0.45**	-0.33	-0.49
VT47	Cog.	-0.91	-0.90	**-0.15**	-0.35	-0.33	-1.61

Note. Acad Rat. = Academic Rationalist, Beh. = Behavioral, Cog. = Cognitive, Soc. Recon. = Social Reconstructionist, Ecl. = Eclectic, Hum. = Humanist. All scores are standardized scores (z-scores) for each of the COI scales for the Virtual Teachers. Numbers in bold represent the highest rated curriculum orientation for each participant.

To further explore this question, the initial sample of 47 was reduced to 20 participants who chose to complete a second curriculum-orientations survey. This survey was administered online to the 20 participants. The researcher created a survey that attempted to "force" participants to choose a dominant curriculum orientation. The instrument, named "Forced-Choice with Descriptors" is found in Appendix B.

In contrast to their scores on the Modified-COI, most teachers chose Humanist (35%) as their curriculum orientation when answering the Forced-Choice instrument, followed by Cognitive Process (30%). Curriculum orientation preferences based on the ranking task are displayed in Table 6.

Table 6

Percent of Teachers' Ranking Each Curriculum Orientation

	Highest Forced-Choice Ranking
Academic Rationalist	20%
Humanist	35%
Cognitive Process	30%
Social Reconstruction	10%
Behavioral/Technlg	10%
Eclectic	15%

n=20. Highest Forced-Choice ranking is greater than 100% because four teachers had ties for the highest-ranking curriculum orientation. Both highest ranked choices were included in the percentages.

The correlations shown in Table 7 show that Social Reconstruction has the strongest correlation between the Modified-COI and Forced-Choice. It is notable that the correlations between most of the Force-Choice scales and the Modified-COI are low. By correlating them the validity of the new instrument to show that they are measuring similar constructs was checked. It was expected that the correlations would be high. With the Forced-Choice scale and the Modified-COI, most of the correlations are low, indicating they measure different things. However, the sample is only 20, so there is not a lot of power and it probably is not representative of the population.

Table 7

Correlations Between Modified-COI and Forced-Choice Scales

	Correlation between Modified-COI scales and Force-Choice Scales
Academic Rationalist	.13
Humanist	.39
Cognitive	.25
Social Reconstruction	.56**
Behavioral	.22
Eclectic	-.05

**$p < .01$. $n = 20$ (content validity established using Modified-COI expert to review test specification and selection of items for Force-Choice scales. Criterion validity evidence uses valid and reliable instrument Modified-COI with the Force-Choice instrument.)

Question Two Results

Question 2: In particular, are the curriculum orientations of teachers in virtual schools settings similar to or different from comparable teachers in brick-and-mortar settings?

To address this question, independent *t*-tests were performed (treating virtual and brick-and-mortar groups as random samples). The age and gender characteristics of 43 (out of a total of 47) virtual teacher participants were used to create a matched sample of teachers from the brick-and-mortar dataset. These 43 virtual teachers were matched exactly on gender and age. For analysis, the remaining four virtual teachers who were not matched did have a corresponding participant on gender, but not on age. However, for these four remaining virtual teachers, brick-and-mortar teachers in the adjacent age group below were used. There were three females in the age group of 31-45 years who did not have a match, so they were matched with females from the age group of 23- 30 years. There was one male from the age group of 46-65 years who was matched with another male from the age group of 31-45 years.

Results shown in Table 8 show that brick-and-mortar teachers' (n= 247) mean ranged

from 3.37 (SD= .77) to 4.03 (SD= .50) (highest score possible= 5), whereas the brick-and-mortar

matched sample teachers' (n= 47) mean ranged from 3.31 (SD= .77) to 4.15 (SD= .38). The

combined sample (n=294) shares the same mean as the brick-and-mortar sample (n=247) for the

Cognitive Process curriculum orientation. Overall, when both samples are combined, the means

do not differ much from the total sample of brick-and-mortar teachers (n=247).

Table 8
Descriptive Statistics for Samples

	Academic Rationalist	Humanist	Cognitive	Social Reconstruction	Behavioral	Eclectic
Virtual Teachers (n = 47)						
Mean (SD)	3.51 (.57)	3.60 (.67)	4.07 (.48)	2.96 (.84)	4.00 (.50)	3.63 (.60)
Brick and Mortar Teachers (Total Sample, n = 247)						
Mean (SD)	3.42 (.61)	3.87 (.58)	4.03 (.50)	3.37 (.77)	3.85 (.62)	3.75 (.51)
Brick and Mortar Teachers (Matched Sample, n = 47)						
Mean (SD)	3.51 (.47)	3.80 (.59)	4.15 (.38)	3.31 (.77)	3.98 (.55)	3.76 (.50)
Brick and Mortar and Virtual Teachers Combined (n = 294)						
Mean (SD)	3.43 (.60)	3.82 (.60)	4.03 (.50)	3.30 (.79)	3.87 (.61)	3.73 (.53)

As presented in Table 9, there was a statistically significant difference between the two

matched samples on the Social Reconstruction scale (p<.05). It should be noted that the brick-

and-mortar teacher sample had higher mean scale scores. The Cognitive Process curriculum

orientation had the highest mean range when comparing both samples. The virtual teacher

sample's mean score was 4.07 (SD= .48) and brick-and-mortar teachers had a mean of 4.15

(SD= .38) (highest possible score= 5). The Academic Rationalist orientation showed no

differences between the two sample groups sharing the same mean score of (M=3.51), although

the virtual teacher sample mean score displayed a slightly greater dispersion with a standard deviation of .57 in contrast to the brick-and-mortar sample's mean (SD= .47).

Table 9

Differentiating Features of Curriculum Orientation Profiles of Virtual Teachers vs. Brick-and-Mortar Teachers

	Virtual Teachers	B&M Teachers	Mean Difference	*t* value	*df*	*p* (two-tailed)	Effect Size (Cohen's *d*)
Academic Rationalist	3.51 (.57)	3.51 (.47)	.00	0.00	92	.99	.00
Humanist	3.60 (.67)	3.80 (.59)	-.20	-1.53	92	.13	-.32
Cognitive Process	4.07 (.48)	4.15 (.38)	-.08	-0.90	92	.37	-.19
Social Reconstruction*	2.96 (.84)	3.31 (.77)	-.35	-2.12	92	.04	-.44
Behavioral/Tech.	4.00 (.50)	3.98 (.55)	.02	0.16	92	.88	.03
Eclectic	3.63 (.60)	3.76 (.50)	-.13	1.14	92	.26	-.23

n = 94 (47 for Virtual Teachers, 47 Brick-and-Mortar Teachers) Matched by Gender and Age

To create an orientations profile for the sample of virtual teachers, correlations were calculated. As seen in Table 10, there is a pattern of significant relationships among several of the orientations. There is a strong correlation when r is greater than .80, indicating 64% shared variance between two variables. There is a moderate correlation when r= .40 to .60. A weak correlation is found when r is less than .30 (less than 9% shared variance). Therefore, the correlations among the six curriculum orientations using the Modified-COI for virtual teachers indicates that there are moderate relationships between curriculum orientations, which indicates a different pattern than the one found in previous research with brick-and-mortar teacher samples that indicated a weak to moderate correlation (Jenkins, 2006).

However, the correlations between pairs of curriculum orientations for this study were distinctively weaker than those found in the primary research conducted by Chueng & Wong (2002). In the current study, only three correlations are not significant. The three correlations found with no significance were those between Humanist and Academic Rationalist (r=.13); Behavioral/Technological and Humanist (r=.12); and Behavioral/Technological and Social

Reconstruction (r=.27) which was different from other studies. In Jenkins's (2006) study there was only one correlation that was not significant, Social Reconstruction and Behavioral/Technological. The correlations of this study range from Eclectic and Behavioral/Technological as the low (r=.39) to Cognitive Process and Humanist as the high (r=.72). The correlations of the counterpart sample of brick-and-mortar teachers indicate the majority is also moderate. Three of the correlations showed no significant differences. Those with no significance were between Social Reconstruction and Academic Rationalist (r=.08), Eclectic and Academic Rationalist (r=.27), and Behavioral/Technological and Humanist (r=.23). Interesting enough, the brick-and-mortar teachers displayed a higher correlation between Behavioral/Technological and Academic Rationalist (r=.64) and Eclectic and Humanist (r=.64). Both teacher groups have the same significant correlations on most scales, which indicate the two groups are alike.

Table 10

Correlations between Modified COI scales for Virtual Teachers (Matched Sample B&M Teachers)

	Academic Rationalist	Humanist	Cognitive	Social Reconstruction	Behavioral	Eclectic
Academic Rationalist	1.00					
Humanist	.13 (.29*)	1.00				
Cognitive	.39** (.44**)	.72** (.51**)	1.00			
Social Reconst.	.41** (.08)	.55** (.59**)	.51** (.39**)	1.00		
Behavioral	.51** (.64**)	.12 (.23)	.46** (.53**)	.27 (-.01)	1.00	
Eclectic	.51** (.27)	.69** (.64**)	.63** (.56**)	.66** (.61**)	.39** (.32*)	1.00

*Statistically significant at $p < .05$; **Statistically significant at $p < .01$

Another analysis was performed to test the differences between virtual teachers who taught primary school (K-8) and secondary levels (9-12) (see Table 11). The grades taught by teachers were used to group them into K-8 and 9-12. Several teachers (n= 6) were not included in this

part of the analysis because they taught either all grades (K-12), a mixture (e.g., 6-12), or they did not indicate which grade levels they taught. There were two statistically significant differences in this analysis. K-8 teachers displayed higher mean scores on the Humanist scale, and 9-12 teachers had higher mean scores on the Behavioral/Technological scale. The difference on the Humanist scale was large according to the effect size, and was significant even after correcting for multiple tests (when the *p*-value needs to be below .008).

Table 11

Comparing Differences between K-8 Virtual Teachers & 9-12 Virtual Teachers Using Modified-COI

	K-8 Teachers	9-12 Teachers	Mean Difference	*t* value	*df*	*p* (two-tailed)	Effect Size (Cohen's *d*)
Academic Rationalist	3.34 (.55)	3.51 (.45)	-.17	1.06	39	.29	-.34
Humanist	3.93 (.54)	3.33 (.60)	.60	3.33	39	.00	1.07
Cognitive	4.18 (.39)	3.96 (.48)	.22	1.53	39	.13	.49
Social Reconstruction	2.83 (.70)	2.99 (.88)	-.16	0.63	39	.53	-.20
Behavioral	3.85 (.49)	4.15 (.42)	-.30	2.12	39	.04	-.68
Eclectic	3.64 (.55)	3.53 (.55)	.11	0.66	39	.52	.21

K-8 Teachers *n*= 19, 9-12 Teachers *n*= 22

Cohen's *d* was used to determine effect sizes. Effect sizes are as follows:

.20= small

.50= medium

.80= large

Several tests were conducted on these groups, which could cause Type I error. To control for it, Bonferroni was used to correct for multiple test which is .05/6= .008. After correcting using Bonferroni, Humanist shows a significance of .00 with an effect size of 1.07 (large). The

remaining four orientations showed no significance when virtual teachers were divided into K-8

and 9-12.

Question Three Results

Question 3: What are the teachers' in virtual settings perceptions of curriculum in online
learning?

This question was addressed using two methods. The first method used an online

instrument that produced quantitative data. The second method used semi-structured interviews

with virtual teachers matching a specific qualification using the data from the online instrument.

The instrument featured a list of six descriptions of curriculums (one written for each curriculum

orientation). Participants were provided the opportunity to select the curriculum currently used

in the virtual school/program where they taught. Then, using the same six descriptions,

respondents ranked the curricula, using as the criterion their ideal curriculum. Results include a

profile of the participants (using pseudonyms to ensure to confidentiality), individual data results

using participant's exact words, topic themes of virtual teacher perceptions, subthemes, and

coding within each subtheme.

The results show that the curriculum currently being used in most virtual

programs/schools expressed an Academic Rationalist orientation (40% in Table 12). This aligns

with the previous studies that showed Academic Rationalist is the curriculum used most

frequently. The second most prevalent curriculum in virtual programs/schools was identified as

Behavioral/Technological (35%). Due to high-stakes testing, many curriculums used today

focus on measurable objectives with instructional activities and assessments. The ideal

curriculum that was chosen as the most favored was Humanist (30%). It is not a surprise that

only 5% of participants chose Behavioral/Technological as the ideal curriculum since its

apparent focus on the standardized tests is not an acceptable teaching model for most. Eclectic

(15%) was the third most-chosen ideal curriculum. Eclectic orientation is a systemic orientation

drawing consciously from the major curriculum orientations in order to achieve the educational

aims sought by local constituencies (Mahlios, et al., 2007). Eclectic was chosen more than

another curriculum orientation except for one, the Current Curriculum. Reliability was

established using a preexisting instrument to create a format to force participants to choice one

answer using the key words and phrases from the Modified-COI (Mahlios et al., 2007). The

Forced-Choice with Descriptors instrument used keywords and phrases from the Modified-COI

(Mahlios et al., 2007) that establish reliable and valid data in the measurement of preferred

curriculum orientation choices by the virtual teachers. Curriculum orientation preferences based

on the ranking task are displayed in Table 12.

Table 12

Percent of Teachers Ranking Each Curriculum Orientation as Their Ideal Orientation

	Current Curriculum	Ideal Curriculum	Highest Forced-Choice Ranking
Academic Rationalist	40%	5%	20%
Humanist	10%	30%	35%
Cognitive Process	5%	25%	30%
Social Reconstruction	5%	25%	10%
Behavioral/Technlg	35%	5%	10%
Eclectic	5%	10%	15%

n=20. Highest Forced-Choice ranking is greater than 100% because four teachers had ties for the highest-ranking curriculum orientation. Both highest ranked choices were included in the percentages.

Table 13 shows that the ideal curriculum agrees mostly with the highest Modified-COI by

35%. This indicates that virtual teachers' Modified-COI partially aligns with the ideal

curriculum mostly chosen.

Table 13

Agreement between Three Methods of Preferred Curriculum Orientation

Comparison	Percent Agreement
Ideal vs. Highest Modified-COI	7/20 (35%)
Ideal vs. Highest Forced-Choice	6/20 (30%)
Highest Forced-Choice vs. Highest Modified-COI	5/20 (25%)

$n = 20$

Qualitative methods were also used to answer Question 3. Personal interviews were employed to explore the research question. The results include findings from the 10 virtual teachers, culled from the 20 participants completing the second online survey (Forced-Choice with Descriptors) who were invited to take part in interviews. The 10 virtual teachers were identified for an open-ended interview based on their responses to both online surveys, Modified-COI and Forced-Choice, which indicated their strong preference for one curriculum orientation out of the six. Each of the six curriculum orientations was represented for the interview with three orientations represented by more than one participant (Humanist, Cognitive Process, and Behavioral/Technological). Semi-structured interview questions were developed by the researcher to elicit in-depth responses from virtual teachers. A pool of 17 semi-structured questions was developed for the interviews with virtual teachers (Appendix C). Results are divided into two sections. The first section summarizes the research process used. The second section provides context for the interviews.

Section 1

Results from this study provide data analysis collected from 7.5 hours of semi-structured interviews obtained online using Skype and a recordable pen. These interviews were used obtain further elaboration the virtual teachers' perceptions of (a) their preferred curriculum orientation

(as per survey results), (b) curriculum in general, (c) curriculum currently used in their virtual

school/program, and (d) the ideal curriculum (if given a choice). Analyzing the transcripts of

interviews provided the researcher with four key overarching themes, which were elaborated into

10 subthemes.

Data collection and analysis were performed to answer Research Question 3 using the

constant comparative analysis method (Glaser & Strauss, 1967) for qualitative research. Three

phases of data analysis were performed. During Phase 1, a thorough review of all of the

interviews was completed and compared to the preliminary notes taken during each interview.

Interviews were then transcribed verbatim for coding. After all interviews were transcribed, the

researcher emailed the transcripts to the participants to verify the information. The participants

all agreed with the transcriptions. The researcher then searched the transcripts for repeated

themes. It is interesting to note that seven out of the 10 participants stated they actively sought a

virtual teaching position. This later became part of the subthemes. Transcripts were first

analyzed using a qualitative analysis software tool called HyperRESEARCH. This software

allowed the researcher to manage all 10 interviews, making it easier to find information quickly.

Its use helped the researcher identify common phrases, key points, topics, terminologies, and

categories. Participant narratives were divided into 312 individual responses, sorted into four

key themes: (a) Curriculum Views, (b) Curriculum Orientations, (c) Virtual Education, and (d)

Virtual Training. The 46 non-related responses were not included in the 312 responses. The

focal point of the theme, Curriculum Views (9.05% of the responses), was the current curriculum

used in the virtual program. This key theme revealed how much control the virtual teacher has

with implementing the curriculum. The responses were grouped under this theme because they

all looked at the curriculum from the viewpoint of the virtual teacher and how it affected

teaching and learning. Curriculum Orientations (44.61% of the responses) showed how the virtual teacher uses the curriculum orientation chosen from the Forced-Choice with Descriptors instrument to make curricular decisions. Responses were grouped to show the influence of the curriculum orientation in a virtual setting. Virtual Education (22.78% of the responses) was a key theme identified from interviews showing the career path of a virtual teacher. It was important to show how much the virtual teacher understood concerning virtual education. Responses identified the appeal of a virtual environment. Virtual Training (20.90% of the responses) was grouped around education, training, and professional development received for teaching virtually. It exposed the way virtual teachers are prepared to teach online and how ongoing training is valued in the virtual school/program. Figure 4 summarizes the key themes derived from the interviews.

Phase 2 entailed inductive analysis of data, that is, organizing the interview data in a way that facilitated dividing narratives into subthemes for coding. During this phase, transcripts were read again with a "fresh eye" to reduce bias in deriving themes by allowing them to arise from the data. The original themes were compared to the non-biased reading to develop subthemes (pertinent to the research questions) for data analysis. Figure 5 shows the main themes along with the subthemes.
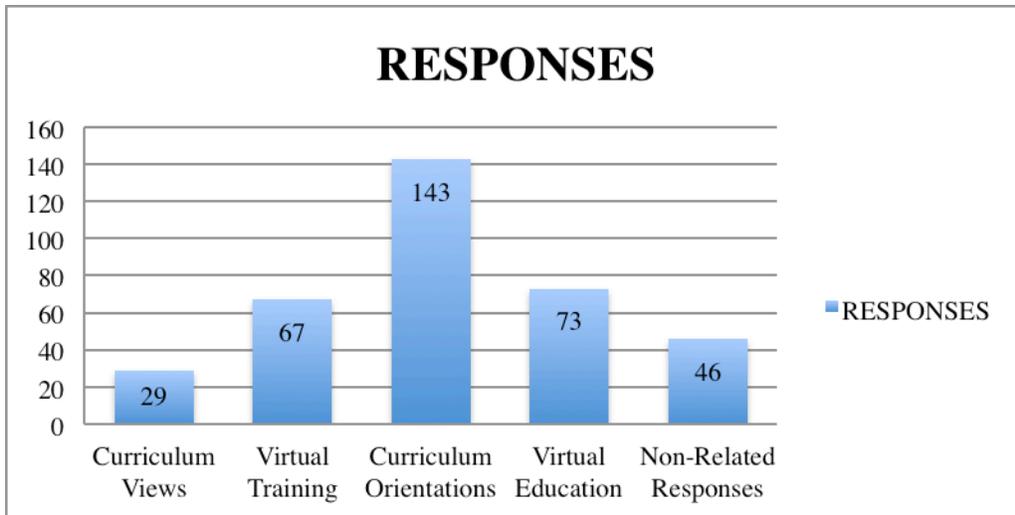
Figure 4. Identifying Main Themes from Interview Data
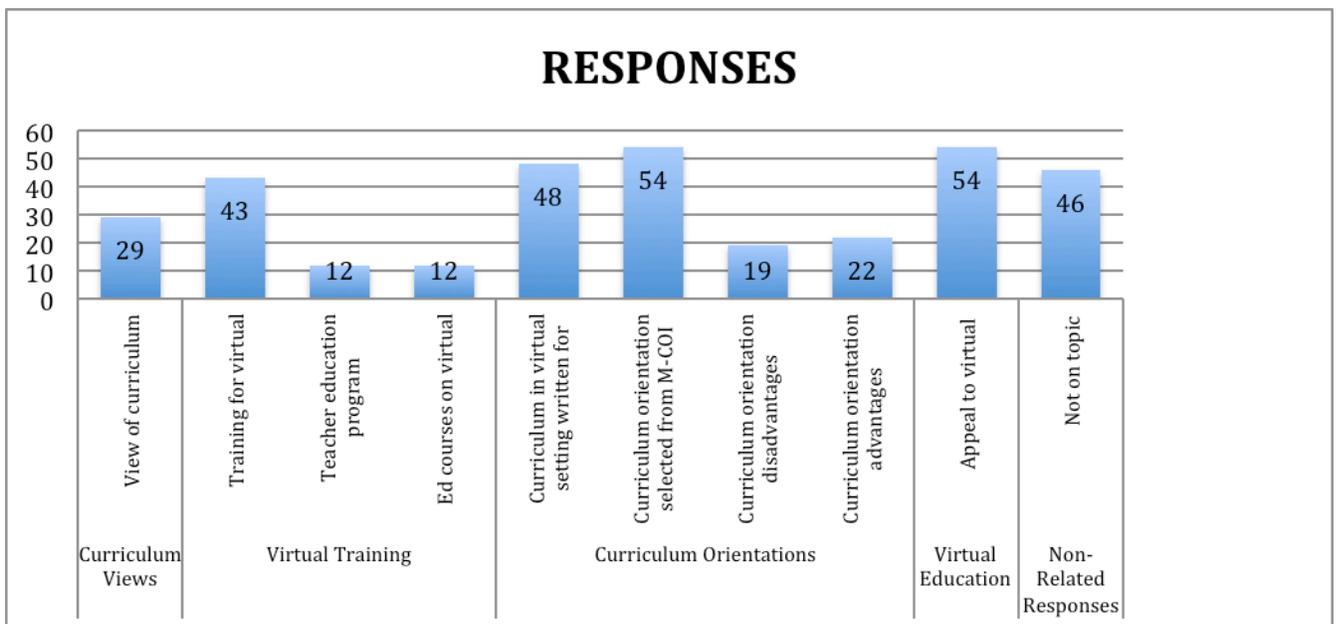
Figure 5. Subthemes categorized within main themes

There were also 46 responses not related to the study that were labeled as "Non-Related

Responses." Some responses were identified as pertinent to more than one theme. In order to fit

the response into one theme, the question was read again. This provided clarity for the

appropriate theme placement. The majority of the responses fell under the Curriculum

Orientation theme (n= 143, or 44.61% of 312 total responses).

Phase 3 consisted of connecting the subthemes to the major themes for coding. During this phase, themes were compared to interview questions for consistencies within each theme category and sorted accordingly. Responses were then color coded to identify which subtheme belonged to which major theme. There were 46 nonrelated responses, which were then excluded from the Phase 3 analysis. None of the responses were taken into account for determining the virtual teachers' perception of online curriculum. These responses were used to provide a more in-depth view of the virtual school/program and the virtual teacher. Figure 6 displays the themes and subthemes with responses to subthemes.

The one subtheme under Curriculum Views was named to show how virtual teachers view online curriculum. Virtual Training has three subthemes, which were named accordingly because each looked at a different training option. Curriculum Orientation has four subthemes. Each one broke down viewing the chosen curriculum orientation from a different perspective. Virtual Education has two subthemes that show the interest in virtual teaching and what, from the virtual teachers' points of view, would be the ideal curriculum for the virtual school/program.

THEMES	SUBTHEMES	RESPONSES
CURRICULUM VIEWS	View of Curriculum	29
VIRTUAL TRAINING	Training for virtual	43
	Teacher education program	12
	Education courses on virtual	12
CURRICULUM ORIENTATIONS	Curriculum orientations selected from COI	54
	Curriculum orientation disadvantages	19
	Curriculum orientation advantages	22
	Curriculum in virtual setting written for	48
VIRTUAL EDUCATION	Appeal to virtual	54
	Ideal curriculum	19
NON-RELATED RESPONSES	Had no idea it would even be an option*	4
	A course explaining how it fits into teaching*	3
	Advice for student teachers*	14
	Wish list of things to have known before hand*	10
	Types of curriculum*	3
	Rigor in course*	4
	Learning styles*	4
	Course design*	4

Figure 6. Themes and subthemes from interviews with participants, *= other non-related responses

Section 2

Interviews provided the context for the study and established profiles for the 10 virtual

teachers in a virtual school/program in Kansas. The participants were selected based on

established criterion of using the curriculum orientation chosen from the Forced-Choice section

of the instrument. The participants all indicated one clear preference for one of the six

curriculum orientations. To maintain confidentiality, the researcher selected pseudonyms for the

participants. All participants were female except for one and all but one had earned a Master's

degree (see Tables 14 and 15). Table 16 shows that the majority of participants were between the

ages of 31 to 45, with no participants younger than 31.

Table 14

Participants in Study

Number of Participants	Gender
9	Female
1	Male

n= 10

Table 15

Participants' Education Level

Number of Participants	Level of Education
9	Master's
1	Bachelor's

n= 10

Table 16

Participants' Range of Ages

Number of Participants	Age
0	22 or younger
0	23 to 30
7	31 to 45
3	46 to 65
0	65 or older

n= 10

The profile of the interview participants in Table 17 describes the individual teacher's

curriculum orientations from the Modified-COI and the Forced-Choice with Descriptors

instrument. The majority of participants interviewed identified with the

Behavioral/Technological curriculum orientation. Six out of the 10 participants chose the same

orientation for both instruments. Context from the interviews will further explain the

information from the tables, using each of the participants' points of view to address the research

question: "What are the teachers' (in virtual settings) perceptions of curriculum in online

learning?" The interview structure is organized according to the Forced-Choice with Descriptors

chosen by the virtual teachers.

Table 17

Participants for Interviews

	Modified-COI	F/C w/Descriptors	Current	Ideal	Grade Level	Yrs. Teaching	Yrs. In Virtual	Teaching Contract
Tara	Eclectic	Eclectic	B/T	SR	9-12	6+	5+	PT
Sue	Behav/Techno	Behav/Techn	B/T	CP	3-5	6+	2-4	FT
Sally	Acad Rat	Behav/Techn	B/T	CP	9-12	6+	5+	PT
Eliza	Acad Rat	Behav/Techn	AR	B/T	9-12	6+	2-4	PT
Nia	Cog Pro	Cog Pro	H	H	3-8	6+	2-4	FT
Kate	Humanist	Cog Pro	AR	C	K-8	6+	2-4	PT
Mike	Humanist	Acad Rat	B/T	SR	9-12	6+	5+	PT
Logan	Humanist	Humanist	AR	H	3-5	6+	2-4	FT
Kelly	Soc Recon/Cog Pro	Soc Recon	SR	CP	6-12	6+	0-1	FT
Sindy	Humanist	Humanist	H	SR	6-12	1-5	5+	FT

n=10

Eclectic. There was one virtual teacher, "Tara" (note: pseudonyms are used for all

participants), interviewed whose favored curriculum orientation was Eclectic. Tara is an Eclectic

secondary teacher who teaches in a virtual setting part-time. She has 6 or more years of overall

teaching experience and 5 or more years as a virtual teacher. It was easy to build a rapport with Tara from the beginning of the Skype interview because she was so excited that her voice would be heard in support of virtual education. Starting with the first interview question, the researcher knew rich information would come from this participant. The interview questions listed under Curriculum Views (Appendix C, questions 1-4) provided insight into her perspectives on curriculum in the virtual program/school. In describing the curriculum, Tara stated, "it didn't allow for much error for kids to learn from mistakes." Teachers were not able to modify the curriculum, but "at the time it met the standards so we didn't tinker with it. The option would have been there and we would have been able to modify some things in time." Tara made an interesting point concerning how the curriculum should evolve when she said, "add more activities where they could video themselves or take still photos of what they were doing and send it in." Tara's perception of online curriculum (reported in the theme Curriculum Views) is that the curriculum currently being used is not teacher-friendly and teachers are not empowered to modify it for the student.

Tara responded to questions concerning her preparation for teaching in a virtual environment (Appendix C, questions 15-17). She received no formal training to teach online: "I am definitely self-taught!" She attended a couple of webinars hosted by Blackboard. "When I first got started, Blackboard had a series of courses that made you a certified Blackboard teacher." To summarize the theme Virtual Training, Tara learned on her own how to teach online, with the assistance of webinars from a learning management system, Blackboard. She only received professional development training through webinars, and they were not consistent.

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Tara's input on the key theme, Curriculum Orientations (Appendix C, questions 5-8) began by asking her questions about how she views the orientation she chose and if it identifies with her beliefs. She responded,

> My most dominant curriculum orientation is Eclectic, which is what I expected it to be after I read the description of it. It is so me. I use take in consideration the needs of the students, their location, and their experiences when I am teaching. We should work together. Not me seen as just the one with all the knowledge on things that you could give a hoot about. What is important to you should be considered.

When questions were asked about advantages or disadvantages of having a curriculum view of Eclectic, there was definitive answer to disadvantages. "I like at the end, that teachers and students are partners. I can give suggested products for the students or suggested output and it can be acceptable." Tara agreed with her curriculum orientation chosen, Eclectic, using the Forced-Choice with Descriptors instrument. It was seen as a strength for making curricular decisions and assisting students because of how she can make considerations for students based on outside factors.

The key theme, Virtual Education, revealed many responses from Tara that connected it to the research question. She provided the most details for the questions (Appendix C, question 9-14) asked about Virtual Education. When explaining her story of how she became a virtual teacher, Tara started from the beginning of her teaching career;

> I started off in a traditional high school teaching the sciences – chemistry and physics. From that experience, I started working a lot with underserved students. This was a total change in my philosophy since, at that time, I was a hard-core college prepper.

Tara continued her story and talked about how she became a virtual teacher:

> I was the one creating the curriculum to be served online to all the learning centers. So, I started teaching a small high school online, chemistry and physics, because their student load was so low and they could not afford a full-time teacher. That's where the full-blown virtual education piece came in!

Tara was excited and smiled the entire time while responding to this question. When asked

about the attraction to virtual education, her responses were geared toward student benefits. For

example,

> We are able to have work sessions and practice problems online with a whiteboard and
> record those sessions for later use for the student. The online learners really appreciate
> that because they didn't have anyone there to help them with problems. Students were
> able to get the help they needed within hours using technology and because I had
> experience writing curriculum, I had a big advantage on how to teach science in a way
> that a student would get it.

Tara was attracted to virtual education to help the underserved populations: "This attracted me

and met my expectations in regards to being able to serve students that weren't being served."

Tara's responses supported the claim that she has a positive perspective on online learning.

Tara chose Eclectic as her curriculum orientation using the Forced-Choice with

Descriptors (Appendix B). When choosing the curriculum currently used in her virtual school,

she chose Behavioral/Technological using the Descriptors provided. She agreed with her choice.

Her choice for the ideal curriculum was Social Reconstruction. She agreed with her choice

because she wants students to be more aware of how to see the problems faced in society and

come up with solutions together. "We can solve many problems and be more self sufficient as a

nation if we allowed students to be creative and attack problems in small areas." Tara shared

many non-related responses to the key themes. For example, she talked about what she would

tell pre-service teachers about virtual education: "Similar to teaching in brick-and-mortar, time

management is huge because you can find yourself getting sucked into all these questions that

are coming in one after the other." She made reference to maintaining boundaries for

availability: "Maintaining hours to address questions like three times a day instead of during the

whole day." Tara shared the most important advice to new teachers: "You must have clear

communication. I would say written over spoken. It's the little details that now have to be

written instead of spoken." Using the responses from the interview, the researcher made the assumption that Tara had a negative perception of the curriculum currently being used but was happy she was able to provide better support due to her curriculum design background. However, she understood the reason for using it, and would change it if given the chance.

Behavioral/Technological. There were three virtual teachers interviewed who chose Behavioral/Technological as their curriculum orientation.

Sue. Sue is a full-time elementary teacher with six or more years overall teaching experience and 2-4 years experience as a virtual teacher. Sue informed the researcher that she tends to ramble and would need a prompt to keep her focused on the questions. The interview began with the Curriculum Views questions (Appendix C, questions 1-4). When Sue was asked about the current curriculum used she stated, "It is not scripted and you can add your own outside resources or whatever that you need. That's what I like about it." The curriculum used must now be adapted to meet the needs of all students due to the new policy implemented by the new director. "It is hard to come up with curriculum adaptations for a kid in the third grade that is still working on pre-academic skills. It has really been a challenge." In this situation, Sue explained how putting alternatives together, ordering additional materials, and the time spent on prep and talking to parents have been a challenge: "You can only modify the curriculum so much and at some point I am going to have to have that conversation with her mother about looking at other alternative learning environments." Sue shared more of her frustrations with how the curriculum is able to be modified, it just does not work for all students, especially special education students if you do not have the background in special education: "My second year there, I was asked to go over to special ed. My background helped me because I understood the curriculum. I understood how to modify the curriculum for special ed students, but not to that

degree on my caseload that kept increasing." Sue's perspective of online curriculum, looking through the lens of the key theme, Curriculum Views, is that it is easy to modify. However, a teacher can only modify the curriculum to a certain extent before the curriculum provided is no longer used as intended.

When Sue was asked a question pertaining to Virtual Training (Appendix C, questions 15-17), she laughed at the interview question about the training received to teach online and responded, "What I received is what we call baptism by fire! Pretty much. I felt like I just cannot learn another thing." She received no formal training at a university or college to teach online. "We had training before the start of the school year on using the systems we were using to teach with. We also have professional development once a month at the site." Sue's responses reveal training was received with professional development every month.

Curriculum Orientations influence one's perceptions of curriculum. This key theme elicited responses to questions regarding Sue's curriculum orientation, Behavioral/Technical, in online settings. Questions (Appendix C, questions 5-8) began with how was her curriculum orientation seen as an advantage in the virtual program. Sue responded, "I think the curriculum is centered on student's mastering cognitive skills or just mastering skills. I think it's important to build from prior knowledge." The response supports her curriculum orientation choice. When asked, Sue saw her curriculum orientation as a disadvantage:

> A disadvantage is I'm not right there with the student making sure they are driven to do the day-to-day work. You just have to be very trusting of your families to be upfront to say the student is having an achievement problem.

Sue explained the characteristic with which she identifies:

> I think we have to adhere to the state standards. I fought and fought to make it more individualized. But I believe you do have to look at and have benchmarks now. I have crossed over and changed my views, even in my virtual teaching position."

Sue agreed with her curriculum orientation choice.

Sue responded to questions concerning virtual education (Appendix C, questions 9-14). She was laughing when the question was asked about getting into virtual education, and responded,

> My story is very unique how I ended up being a virtual teacher. Kinda by mishap almost. I was a functional teacher and thought I would actually retire at the school I was at. Something happened, I called it a midlife crisis in teaching. I knew I needed a change.

Sue continued her story, in great detail, about how she became a virtual teacher. She later stated,

> I was over at the virtual school building and heard good things about the program. There were many positions open and I thought why not apply while I am here. I was offered the special ed position and declined. I wanted general ed first to learn about virtual education. Here I am.

The researcher was informed that the virtual school uses Elluminate as one of the online software tools used. Sue shared, "what attracts me to virtual education is the flexibility you have with the student and the impact you can make on learning because you have more quality time with the student." Sue has a positive reflection of virtual education.

Behavioral/Technological was the curriculum orientation chosen by Sue. Using the Descriptors part on the Forced-Choice instrument, she chose Behavioral/ Technological as the curriculum used by her virtual school. She approved her choice from the selection of Descriptors of curriculum due to the state of education but thinks she is really more of a Humanist. Sue chose Cognitive Process as the ideal curriculum if given a choice, which aligned with her answer on the survey. Non-related responses were plentiful throughout the interview with Sue. One example of a non-related response is, "Anyone that is thinking of teaching online should familiarize yourself with Blackboard and Ellumiate. Be aware of what the different ways that we can communicate with students online." Sue jokingly shared a comment, "Twenty years ago when I was teaching, we had to learn how to use a photocopy machine. I remember having a

class on it and how to use other old archaic machines." Sue had a lot of advice to give to anyone considering teaching online. For instance, "It would be helpful if you have three years in a brick-and-mortar to have experience. But that is just my advice. Remember, I have been a teacher for 18 years now." It can be concluded from Sue's responses in the interview that she had a positive perception of the online curriculum currently used in the virtual school. She agreed with the Behavioral/Technological curriculum choice by the virtual school. If Sue had a chance to pick an ideal curriculum, it would be Cognitive Process.

Sally. Sally is a part-time secondary teacher with six or more years of overall teaching experience and five years or more as a virtual teacher. Sally was able to provide the researcher with a good description of her virtual program. She is in a program that is part of a brick-and-mortar school. Students can be a students of the school and enrolled in the virtual program, or the student can take a couple of courses that are needed from the virtual program. Sally's program does not offer a full-time option and is used by students to make up courses that were failed or for accelerated learning. The researcher was able to compare the virtual program to the virtual schools.

When asked questions concerning the key theme, Curriculum Views (Appendix C, questions 1-4), Sally shared,

> The teachers have to do a lot of curriculum design in our online courses. We're going through the common core standards right now in our math department at the high school. It is expected to then overlap into the virtual school.

Sally was asked about modifying the curriculum, and replied: "It is completely up to us. If there is a neat activity or something that we do in our brick-and-mortar, then we have the freedom to implement that." She responded even further to the question: "We do make sure we're meeting all state standards. It definitely overlaps the same tested items in the brick-and-mortar that's in

virtual, but we do have the freedom." Sally has a positive view of the curriculum in her virtual

program.

Sally responded to questions pertaining to the key theme of Virtual Training (Appendix

C, questions 15-17). No training was provided from an educational institution to teach online.

Sally said,

> Back when the budgets weren't quite so tight, we were able to do usually a week in the
> summer where we could go through and learn how to do different things, grading online,
> learning systems, how to use email, etc. This was exceptionally good for a new teacher.
> All my training came from the district and me already knowing how to use technology.

Sally mentioned that, due to the budget cuts, the professional development is not as often.

Because Sally received her Bachelor's degree in 2004, her response to the online teaching

included in her teacher preparation was, "There was a basic technology course that everyone

took teaching you how to do different programs. Even then, the Internet wasn't popular so

online teaching was foreign." Sally received her training for virtual teaching from the school

district in the form of professional development.

It was important to determine if Sally's curriculum orientation was different when she

taught in the two different settings, virtual and brick-and-mortar. The key theme of Curriculum

Orientations questions (Appendix C, questions 5-8) began with the advantages of her chosen

curriculum orientation. Sally said,

> I think it is a compliment to the curriculum because it is structured, and that's good for
> some of those kids. There is an order, a checklist with a calendar to help kids keep up
> with what is due, what the assignments are, and when tests are coming up.

Most of her answers supported her curriculum orientation. Sally said,

> Kids get a timeline to get all assignments done by the end of the semester since the class
> is self-paced. There was a situation when maybe an older brother was helping the student
> too much on their test; but when they come onsite to take the final, they fail it. So, the
> assessments onsite help us figure out pretty quickly who is not meeting the benchmarks
> and needs a tutor.

Her curriculum orientation is a disadvantage when it comes to creativity as she stated, "There's not much room for creativity in my virtual school course. That is one downfall of being in a virtual environment. In my brick-and-mortar class, students can be creative and show their work in different formats." Sally displays her chosen curriculum orientation in her virtual setting, which works well for her.

Sally's perception of online learning was explored using questions from the key theme of Virtual Education (Appendix C, questions 9-14). Her response to how she became a virtual teacher revealed that it was not a position she sought:

> The assistant director of the virtual school came to me and asked if I had any interest in taking over the pre-algebra course since the current teacher was leaving and she needed a strong content teacher for the position. So that's where I ended up with two teaching positions.

She was not actually looking to teach virtually, but it was an opportunity presented to her; "I met all the job requirements and did not have to interview, so I said it sounded like it would be fun and different." She was pleased with teaching online and in a brick-and-mortar school.

Sally chose Behavioral/Technological as her curriculum orientation using the Forced-Choice with Descriptors (Appendix B). That is believable since she is a math teacher. When choosing the curriculum currently used in her virtual program, she chose Behavioral/Technological using the Descriptors provided. Sally agreed with her program curriculum choice. If she could choose the ideal curriculum, it would be Cognitive Process. Sally validated that choice as well. Due to the common core, the curriculum is aligning with Cognitive Process.

Sally's non-related responses were plentiful. She shared advice for students enrolled in teacher preparation programs, student demographics in the virtual course, frustrations, and so

forth. One example was, "You have to be patient because they might not get it as quick as others. You must be caring and not assume anything because you do not know the situation the student is in." She also stated,

> Communication is a big part of virtual school. They expect us to respond to emails like in 12 hours. The communication has to be there and it has to be quick. If not, I'm holding up their education if I'm not responding. You have to know a lot about technology and be comfortable with it.

An interesting response was, "You can think of my course as transferring my brick-and-mortar class into an online format. But I feel like there are more expectations for the virtual kids than my classroom kids." The responses from the interview provided the researcher with enough information to make the claim that Sally had a positive perception of the curriculum being used in her virtual program. She understood the reason for using it for now, but would change it if given the opportunity.

Eliza. Eliza, the third teacher expressing a strong preference for the Behavioral/Technological curriculum orientation was a secondary teacher who taught part-time in a virtual program and full-time in a brick-and-mortar school. She provided brief answers and did not go into much detail. Eliza was asked questions listed under Curriculum Views (Appendix C, questions 1-4). She described the curriculum currently used as,

> It is not scripted, but we use the same curriculum we have for the high school. I teach the same class in both settings so they both cover the same content. There's not a different curriculum for our virtual school classes.

She is able to modify the curriculum if needed: "I can recommend other resources to help them. I recommend online videos that could be watched to help explain concepts. They are given the opportunity to come in to meet so they can ask questions." She has the same curriculum view due to the virtual course being copied from the brick-and-mortar course with no modifications or enhancements to learning.

Eliza responded to questions from the key theme of Virtual Training (Appendix C, questions 15-17). When it comes to training to teach online, she stated, "The directors of our program taught us how to teach online. It was pretty simple because the material is the same for both of my courses." Eliza pointed out that trainings have been reduced, and "most of the training is done during the summer. My first couple of years we had two weeks to come in and work on stuff and if there was a question the technology person was right there." Because Eliza graduated prior to 2000, her teacher preparation did not include online training.

Curriculum Orientations was the next key theme questions came from (Appendix C, questions 5-8). Eliza shared that her curriculum orientation is neither an advantage nor a disadvantage: "I don't know if I see an advantage or disadvantage just because I teach the same topics and content that I teach in my brick-and-mortar setting also." She provided a response that explained the characteristic that resonated with her; "I think we need to know what [are] the specific objectives and outcomes that we want students to leave our class knowing and understanding. That resonated with me." Eliza did not explicitly state her stance on her perception.

Eliza's responses to the key theme Virtual Education questions (Appendix C, questions 9-14) started with how she got into virtual education:

> A teacher left the high school that was teaching online algebra II and geometry. At that time, because I had been teaching geometry here at the high school, I then also picked up teaching the online geometry course as well.

Eliza did find satisfaction with teaching online but was not sure if it met her expectations. She said, "I didn't have any expectations going into it. I had never done it before, so I didn't have anything to really base it on. I have found it interesting as far as teaching geometry." Teaching online is different as Eliza said: "There are different resources available to the students. You

have to look at different things that indicate the student might need more help because they have to hit a certain mastery level before they can move on." The researcher was unable to draw any conclusion about Eliza's perception of virtual education from her answers to the questions.

Social Reconstruction. There was one virtual teacher interviewed who chose this curriculum orientation.

Kelly. Kelly is a full-time secondary teacher with six or more years of overall teaching experience and less than one year as a virtual teacher. Kelly was able to provide the researcher with responses concerning her perception of online curriculum. When she was asked a question from the key theme, Curriculum Views (Appendix C, questions 1-4), Kelly replied, "The curriculum is completely packaged and certain parts are scripted. There are strengths and weaknesses to it being already made for you. I am comfortable with the curriculum, but it is often difficult for students to follow the instructions." To provide more examples she said, "The curriculum is really difficult to make change and to differentiate from students. Many of the teachers are saying it's too rigid and structured." Kelly does have the authority to modify the curriculum and shared a couple of stories. For example,

> We do modifications quite a bit. One example I can remember is I had a student that was really struggling with even the basic level of English. I would take it apart and extend it over more time in the portfolio. The assignment was a three-page essay and I modified it to produce five sentences that were at least ten words long. Baby steps.

Kelly provided another example of a student at the other end of the spectrum,

> I had a gifted student who had already read a novel that we were reading for class so I had him read another novel that was in the same time period with a different view and create three lessons to go with it for his project.

Even though the curriculum is prepackaged, Kelly believes in the value.

Kelly provided responses to questions reflected within the Virtual Training theme. For example, she stated,

> Oh, the training was pretty intensive. The first year that I started, we had two full weeks of training, three days of really, really, intensive training on the system we work in. We have continuous training and special events. We also can do online training. It is out there and available to use when we want to take it.

Kelly strongly stated,

> I absolutely received no training from my teaching program! Nope, nope, nope. I'm not confident that our schools in Kansas have looked at this as a viable form of education curriculum apart from colleges since they do a lot of virtual education.

Kelly received her training from the virtual school and continuous opportunities online.

The Curriculum Orientation questions (Appendix C, questions 5-8) began with how her curriculum orientation is seen as an advantage: "It is an advantage when I am able to modify it. I always include a piece on applying projects to common problems or coming up with different solution choices that are not normal." Kelly also pointed out that "it can also be a disadvantage in many ways because the curriculum does not allow for that type of exploration." A part of the description in Social Reconstruction resonated with Kelly. She said, "Civic awareness and societal problems is very important to me to make those real life connections. Our curriculum is definitely written for college prep." She provided an example of her beliefs as she responded, "Philosophically, yes, reconstructionist is where the curriculum should be going so we have better citizens that care about the world and society and want to find solutions to important problems." Kelly has strong feelings for her curriculum orientation.

During the discussion on Virtual Education, the responses to questions (Appendix C, questions 9-14) revealed Kelly's perception. Her story about how she became a virtual teacher started out like this,

> Well I'm one of those people that haven't quite figured out what I wanted to be when I grew up. I started out teaching with special education and remedial students. I moved for a change in life and couldn't find a job in my field.

More parts of Kelly's story were about teaching at community college and being a gifted facilitator. The story ends with her looking for a job: "I was looking around and stumbled on the opening here and thought, wow, that kinda sounds like an intriguing idea of online school. So it ended up working out for me." When responding to the question concerning flexibility, Kelly replied,

> I feel a bit more restricted in a virtual setting. I feel like I've lost my flexibility. I think I've gained flexibility in that I can approach my day in the way that I want to approach it. I do not have to answer to someone's schedule or live by the bell.

From Kelly's responses, virtual education did meet her expectations with a positive experience.

Academic Rationalist. There was one virtual teacher interviewed who chose Academic Rationalist as the favored curriculum orientation choice.

Mike. Mike is a part-time secondary teacher with six or more years of overall teaching experience and five or more years as a virtual teacher. The interview began with a question from the key theme of Curriculum Views (Appendix C, questions 1-4). Mike did not have much time to go into great detail with the researcher, as he is a full-time coach at the high school. However, when asked about the curriculum currently used, his response was,

> It was completely developed by a teacher to match the district standards. I am fine with it being already created because of my time. It gets updates frequently by the teacher who developed it. She is good at that and we are lucky.

Mike is able to modify the curriculum for students if needed. He provided an example,

> I had one student that probably shouldn't have been taking health online. He needed a face-to-face experience because he was always having computer issues or whatever. It just was not set up for a positive online experience. What I did was looked at his assessments and used those for his grade. If not, I would have counted all the assignments he missed, he would've failed the course."

When asked about his view of curriculum being shaped by teaching virtually, he responded," I don't know if I would say its been shaped. I think it's given me a deeper understanding of it." Mike has a positive view of curriculum in his virtual school.

Mike responded to questions (Appendix C, questions 15-17) concerning his virtual teaching training (reported in the theme Virtual Training). He shared that,

> I'd say I got a lot of training. I wasn't able to attend everything because I wasn't a full-time virtual teacher. I was a head wrestling coach, so I missed a bunch of stuff. But what I did get was beneficial."

When asked about professional development, he shared, "For the most part, I learned how to manipulate the main system used to manage the course. We now have a lot of training on the new system." The researcher was not able to make any conclusion on Mike's perspective on virtual training.

Curriculum Orientation questions (Appendix C, questions 5-8), elicited responses about Mike's views of curriculum using the chosen curriculum orientation. Mike was asked if his curriculum orientation was an advantage or disadvantage for his virtual course, and he replied,

> You have to understand the curriculum to know what you're gonna do. I don't think my curriculum orientation will affect either the face-to-face class or my online class. You just need to have a grip on your content. The part of the curriculum orientation that resonates with me was having a deep understanding of your academic discipline. That is obviously really important.

Mike had a deep understanding of curriculum orientations and shared his perspectives.

Mike responded to questions from the key theme of Virtual Education (Appendix C, questions 9-14). He told his story of how he got introduced to virtual education: "I originally got in because they needed help at a school and I knew the director and assistant director from working together in a different district. I just kinda fell into it, I guess." His expectation of teaching virtually was indifferent: "I guess it has. I've only taught online, so I guess I didn't

know what to expect in the first place." The researcher learned the virtual school uses Moodle as the learning management system. When asked about the differences in teaching online and in brick-and-mortar, Mike said,

> "I believe the curriculum is very, very similar. Online, there's a lot more work because they don't see me. I don't think anything can compare to actually seeing a student actually working on and completing an assignment so they can ask questions. In virtual it's difficult to find out when students are not getting everything."

Mike added, "With my virtual class, you can still communicate with them when you need to. At school, once the kids leave they don't communicate with you. The email communication really helps. Email is easy to stay in touch and check-in." The researcher was not able to make a decision on Mike's virtual education perspective.

Mike chose Academic Rationalist as his curriculum orientation according to the Forced-Choice with Descriptors instruments (Appendix B). When choosing the curriculum currently used in his virtual school, he chose Behavioral/Technological on the instrument. He agreed with his selection due to standards and benchmarks in place. Mike's choice for the ideal curriculum was Social Reconstruction. He verified the choice was inaccurate. He admitted he read the description wrong and Eclectic was a better fit for an ideal curriculum in his opinion. Mike provided non-related responses that enriched his interview such as, "My advice to others would be that they need to be able to communicate with the student and the parent. It would be nice to tape the lectures for the students." He continued, "They have a weekly due date, which is Sunday evening and we communicate at that time. The curriculum has one message board and I think there should be more." The responses from the interview showed that Mike had a positive perception of the curriculum being used. He understood why it was used for standards. If given a chance, his ideal curriculum would be different.

Cognitive Process. There were two teachers interviewed who chose Cognitive Process as their favored curriculum orientation choice.

Nia. Nia is a full-time elementary and secondary teacher with six or more years of overall teaching experience and 2 to 4 years as a virtual teacher. She was really interested in the researcher's educational background and the specific area of study. Curriculum Views questions (Appendix C, questions 1-4) were asked to find out more about the view of the curriculum in her school. In response to the question concerning the curriculum used in the school, Nia said,

> We use curriculum designed by a company. We have the authority to add any resources. I incorporate a lot of materials into my courses for enrichment. My gifted kids like the challenges. I push them to use their critical thinking skills to solve problems and create projects.

Nia has modified the curriculum many times for students. One example shared was,

> When it comes to independent projects, rather than assess them I work with the student to make sure it is done to an acceptable level or no, you need to work on this some more. Let me share my screen with you to show you a project a student is working on that was modified from a writing assignment to a scavenger hunt project.

Nia also shared that, "My view of curriculum is really changing right now. I like how rigorous the curriculum is. It is written one grade level up in the virtual school." Nia's perspective of the virtual curriculum was accepted and implemented.

Questions were asked about Virtual Training received (Appendix C, questions 15-17). Nia stated,

> I didn't get a whole lot of training. You had to hit the ground running basically. Basically, the day after you are hired, you are actually working with your families so not much training can happen in that short time. I am basically self-taught.

Professional development is offered for the virtual teachers; "We have weekly staff meeting and a monthly meeting where we all get together in person and share and a specific topic is discussed in great detail." No questions were asked concerning her teacher preparation program for online

teaching because she received her teaching certificate before 2000. Nia was not trained on how

to teach online before beginning to teach.

As it pertains to the key theme of Curriculum Orientations, responses to questions

(Appendix C, questions 5-8) showed how Nia's curriculum orientation aligned with the virtual

curriculum.

> My curriculum orientation is an advantage because you can work with students one-on-one on skills that are required. You are right there working with them and trying to make sure they know what they need to know to be able to do the curriculum. . . . I do not see it as much of a disadvantage.

Nia believes in her curriculum orientation.

Nia's responses to the theme, Virtual Education, began with asking questions about her

career path to a virtual teacher.

> .My position was eliminated and I did not feel like going backwards because I was a district facilitator. I was not going to settle for anything in the area. A grandchild of my friend attended a virtual school and it was recommended that I check it out.

The response continued,

> I found out about the school and it was a good fit for me. I got my position. I was attracted to virtual education because of the uniqueness and learning opportunities. I really enjoy the relationships you develop with the students and parents in virtual."

Nia is able to do other activities in the virtual school she could not do in a brick-and-mortar

setting. For example,

> We have a monthly field trip where we meet with our student in a physical location and do school or inquiry work. It is fun, the kids love it, the parents enjoy it, and we get to develop better relationships. We could never do that in a school setting.

Nia had a good understanding of virtual education.

Nia chose Cognitive Process as her curriculum orientation using the Forced-Choice with

Descriptors (Appendix B). When she chose the curriculum the virtual school is currently using,

she chose Humanist using the Descriptor provided. She disagreed with her response and thought

she read the directions incorrectly. The curriculum currently used in her program is

Behavioral/Technological. Her choice for the ideal curriculum was Humanist. She agreed with

her choice because she is very focused on the needs of the students. Nia shared non-related

responses related to the key themes. Examples were,

> Student teachers should be required to observe virtual teachers to see how different
> people do it. Also, great communication skills are required for emails. Make sure you
> are organized because you might have a lot of students to service and take good notes.

> I don't do a lot of bulletin boards; I like to do favorite songs lyrics and have it playing as
> the students come in.

> Sometimes I think about how much of this curriculum do kids really need and need to be
> exposed to. We should just teach them how to learn and they learn it as they need it.

The responses from the interview allowed the researcher to make the assumption that Nia had a

positive perception of the curriculum currently being used. She understood her mistake in

choosing the curriculum for the virtual school and would change it if given the chance.

> *Kate.* Kate is a part-time elementary and secondary teacher with six years or more

overall teaching experience and 2 to 4 years as a virtual teacher. Responses started with

questions from the Curriculum Views theme (Appendix C, questions 1-4). The question was

asked about the curriculum currently used. Kate replied,

> Our online school uses Pearson for curriculum. It is different from the brick-and-mortar
> building. It is standardized and I think it is a lot tougher. It is not scripted and I can
> bring outside materials in to enhance it at any time.

Kate was able to modify the curriculum:

> "Last year we had a student that struggled with some of the English writing. He would
> meet me online during extra hours twice a week for tutoring. I decided to eliminate some
> of the papers he should do. . . . The curriculum is definitely modified to meet the needs of
> the student. Everything is done to make this a good experience for the student."

Kate stated, "Curriculum is looked at differently now since I teach online. It shows me how it aligns with standards and how it is now geared for advanced students." She agreed with the curriculum used in the school.

Kate provided responses to questions on the key theme of Virtual Training (Appendix C, questions 15-17). She received training in teaching online: "There was a two-day training on how to access grades, how to use a website for instruction. There wasn't a lot of training provided. It was mostly trial and error learning on my own." She continued, "I was surprised at that because I thought I am supposed to be able to navigate all through these lessons with only two day of training?" She did have professional development; "Every three months we have some type of professional development on the curriculum or the use of technology." Kate also reported, "I did not receive any introduction to teaching online in my teaching degree. This was not even on the radar during that time." Kate's perspective on her virtual training showed she was not prepared.

The key theme, Curriculum Orientation, was used to ask a question (Appendix C, questions 5-8) about her view of the chosen curriculum. Kate viewed her curriculum orientation as an advantage; "It is an advantage because I try to keep the kiddoes where they need to be academically and their attitude positive. I don't see it being a disadvantage in any way. It is needed for a successful school experience." She spoke of the part that resonates with her: "I start with the problem solving and follow it up by I've got this idea. You know, trying to challenge the kids. This keeps them working as problem solvers." Her perspective on her curriculum orientation aligns with the current curriculum.

Kate responded to questions concerning the key theme, Virtual Education (Appendix C, questions 9-14). She shared her story of becoming a virtual teacher:

We were trying to boost enrollment with the budget cuts. Our superintendent was pretty creative and found out about the virtual opportunity. All the teachers were required to teach or be open to teaching virtually. It kinda was not a choice.

Kate shared that,

I wasn't attracted to virtual until she told us the benefits it would give us and how it would help students. She also included that it would be a tremendous help to the district. I did not want our little school to close. So, I am kind of a techie and change my views to this might be better than what I thought. I would get to work from home.

Kate did admit that teaching online was different from in the brick-and-mortar setting; "I have a little bit more freedom to individualize materials and we interact using Skype. A big difference is the parental involvement that is there. You never see that much in a school. We are partners."

Kate chose Cognitive Process as her curriculum orientation using the Forced-Choice with descriptors (Appendix B). When choosing the curriculum currently used in her virtual school, the choice, using the Descriptors, was Academic Rationalist. She agreed with her response. Her choice for the ideal curriculum was Cognitive Process. She agreed and it was expected. She believes that students should be challenged using problems and taught to evaluate learning as well as how to become critical thinkers. Kate provided more information that was not related to the key themes. She stated, "I can use Dibels online to assess my students. Some of that stuff is pretty cool to know what kind of reader they are." One piece of advice was, "Make sure you take a class online before you teach online. You will have a better understanding of how things work. Be very familiar with technology and what the students are using currently." She also said, "It would be good if they could observe a virtual teacher for a different perspective on teaching." Using the responses from the interview, the researcher made the assumption that Kate had a positive perception of the curriculum used in the virtual school. She understood the reason for using the curriculum and would change it if she had the opportunity.

Humanist. There were two virtual teachers interviewed who chose Humanist as their favored curriculum orientation choice.

Logan. Logan is a full-time elementary teacher with six or more years of overall teaching experience and 2 to 4 years as a virtual teacher. The first responses came from the Curriculum Views theme (Appendix C, questions 1-4). When asked about the curriculum used in the virtual school, she stated, "We are part of a curriculum provider so we use their curriculum. I can use outside resources for any student for extra support." When asked about modifying the curriculum she responded, "I give the parent the freedom to modify it to fit their child. They are the primary instructor." Logan's view of curriculum has changed being in a virtual environment; "Because I homeschooled my kids, I knew the importance of curriculum covering material that must be learned. Now that I am in a virtual environment, I can see how it is aligned and it now connects in my mind." Logan did run into an issue with the curriculum and she handled it accordingly: "A parent did not want their child to study Greek mythology for religious reasons. I came up with a solution, have them study your religion and supplement the assignment to your religion. That was a good solution." Logan has a perception that the curriculum is student friendly and set up to make the child be successful."

Logan was questioned about her Virtual Training (Appendix C, questions 15-17) for teaching online. She shared her experience:

> The director provided professional development for two weeks before the start of the school year for us to get acclimated to the systems, how it looked from the teacher and student side, getting comfortable with the curriculum, and playing around while help was available.

On the subject of professional development, Logan stated, "We have professional development every month onsite. Every time we learn something new." Logan also said, "There was no

mention of virtual nothing in my teacher preparation." Logan was prepared to teach online from training through the virtual school.

Logan responded to the theme, Curriculum Orientations, from questions (Appendix C, questions 5-8) to show how her curriculum orientation aligns with the current curriculum. She was asked about her curriculum orientation being an advantage or disadvantage in a virtual environment. and she replied,

> Well, I see it as an advantage because I look at the whole child and not just standards. This comes from my early childhood background and from homeschooling. I do not see it as a disadvantage at all. If anything, it enhances my teaching and their learning.

Logan was able to see how her curriculum orientation added value to the current curriculum.

Virtual Education was the next theme addressed in the interview (Appendix C, questions 9-14). Logan told her story about how she became a virtual teacher.

> Well, I homeschooled my kids through the eighth grade and received a flyer in the mail from a virtual school to enroll my kids. It sounded pretty good because I was independently teaching my kids in an eclectic approach to things. It was a mixture of all types of curriculum I thought was best.

Logan continued telling her story:

> I went back to brick-and-mortar to teach for one year and knew that was not the environment for me so I contacted the director of the virtual school where my kids were enrolled to see if there were any job openings. It just worked out and I am happy with my decision.

There was an attraction to teaching virtually; "I am able to focus on each student individually as the whole child also meeting the standards." Logan pointed out that there is a difference in both environments: "I am able to get more parental support, I am able to meet the needs of my students to the best of my ability, and the curriculum used is easy to differentiate." Logan has an understanding of virtual education and how it played a role in her teaching decision.

Logan chose Humanist as her curriculum orientation using the Forced-Choices with

Descriptors (Appendix B). When choosing the curriculum currently used in her virtual school,

she chose Academic Rationalist using the Descriptors provided. She agreed with the curriculum

choice and it could also be Behavioral/Technological since the state standards. Her choice for

the ideal curriculum was Humanist. She agreed with her choice. Students need to explore their

interest and learn about social development. She has a focus on developing the whole-child with

the assistance of the parents. Logan shared non-related responses to key themes. For example,

> This year my daughter told me she thinks she wants to go into education. I was excited
> to hear that. She said wanted to go into elementary education. I was even more excited.
> I told her to look for colleges or universities that have good programs. I just happened to
> ask if she seen any schools that offered anything on virtual education, NO! That is
> terrible.

Logan also stated, "You do not have to have the best classroom management skills." Using the

responses from the interview, the researcher made the assumption that Logan had a positive

perception of the curriculum being used. She understood the reason it is being used and would

change it if given an opportunity.

> *Sindy*. Sindy is a full-time elementary teacher with 1-5 years of overall teaching

experience and over five years as a virtual teacher. The interview began with the Curriculum

Views questions (Appendix C, questions 1-4). When Sindy was asked about the curriculum

currently being used, she stated, "Our curriculum comes with the virtual school. We are part of a

virtual corporation. It is a benefit to have a curriculum to follow that allows you to add other

curricular activities." Sindy responded to the question concerning a time the curriculum was

modified;

> There was one student that was having a hard time writing a paragraph. He just could not
> grasp the concept of sentence structure. I created a portfolio for this kid and we went
> back to the basics. We started at writing one sentence and built our way up and there is
> proof.

Sindy said, "I have not had any conflict with the curriculum so far."

Virtual Training was the next theme questions came from (Appendix C, questions 15-17).

Sindy shared the training she received:

> Our director is amazing. She made sure that we were all very well trained. We jumped into the training and getting the school started all at once. We now get the training on a consistent basis and a lot of it is available online.

Sindy shared, "Nothing close to virtual teaching was mentioned in my education courses." She

received her virtual teaching training at the same time as the school opened.

Responses to Curriculum Orientation began with questions about how she viewed her

curriculum orientation.

> I am more at a disadvantage because I am not right there looking at the student. You have to be very trusting of your families to be upfront. You're at a disadvantage every day when you're not able to look at your student. You do have an advantage that you get to work with them more one-on-one.

When asked about what part of curriculum orientation resonates with her, she responded,

> I want my kids to be productive humans in society. I am between too spectrums because the Social Reconstructionist in me wants kids to get out and participate. I also want them to be able to understand that is okay to make mistakes to foster growth.

Sindy's perspective of her curriculum orientation shows she understands how it affects her

teaching.

Questions from the theme, Virtual Education, probe at the overall knowledge of the

virtual world (Appendix C, questions 9-14). Sindy's story of how she became a virtual teacher

started out; "I had virtual experience teaching before, so I was approached by the director to

teach. It was just that simple." She stated,

> I like the fact that I can use a lot of outside resources to complement the curriculum. It is easy for me to find more challenging activities for my students. It is easier to individualize the instruction for each student and you know where your students are academically.

Sindy agreed that virtual teaching has met her expectations:

> I knew it was going to be hard in the beginning but now that it is up and running, the kids are progressing, and the teachers have a grip on what to do, I am very pleased. I would not want to do anything else. . . . I have a lot of control over the virtual class and what is taught. I am able to make decisions on student's behaviors.

Sindy was asked about her flexibility in the virtual environment and she stated,

> In my class, you do not have to be documented as a student with gifted and talented issues before I provide you with activities that will challenge your thinking. I can modify it. That would never be able to happen in a traditional classroom setting. There would be red tape.

Sindy is fully adapted to the virtual world and functions in it.

Sindy chose Humanist as her curriculum orientation using the Forced-Choice with Descriptors (Appendix B). When choosing the curriculum currently used in her virtual school, she chose Humanist using the Descriptors provided. She agreed with her choice. Her choice for the ideal curriculum was Social Reconstructionist. She agreed with her choice. It is important for students to get experience in democracy and societal issues that affect us now. Sindy shared non-related responses that provided additional information for a better understanding of her perception of online curriculum. One example was,

> You get to slouch around in your sweat pants all day. Then when we have staff meetings you forget you are not at home and some of us show up not looking professional. Teaching online has definitely made me a work-at-home girl.

Sindy's advice was,

> You need to show compassion, teach empathy, and learn quickly how to communicate effectively. You might talk to one family more on the phone and another using email. You just need to be ready for any situation. Make sure you tell the parent something good about their child before breaking any bad news.

Using the responses from the interview, the researcher made the assumption that Sindy had a positive perception of the curriculum currently being used. She understood why it was being used and she would change it if given a chance.

The interviews provided the researcher with rich in-depth information from virtual teachers concerning their perception of curriculum in online learning. Only one teacher out of 10 had a negative perception of the online curriculum as well as a bad experience teaching in a virtual setting. Unfortunately, one teacher was too indifferent with her answers for the researcher to make a clear distinction of the perception. Overall, the teachers in the sample interviewed had positive experiences and perceptions of curriculum in online learning. It is safe to state that the teachers chose to teach in virtual settings because of the relationships they form with the students, the one-on-one teaching opportunities, parental support provided, and the choices to individualize instruction. These experiences were not able to exist in an existing brick-and-mortar environment, which made these teachers capitalize on the experience and do well with it.

CHAPTER 5

DISCUSSION

This chapter presents the major findings and purpose of this study, which was to identify the curriculum orientations held by a sample of virtual teachers to explore the degree to which orientations held by these virtual teachers appear to be unique to their teaching environment, and to explore perceptions. The participants were all certified teachers who taught in public K-12 virtual schools/programs in Kansas. Three instruments were used along with a semistructured interview that all occurred online.

The researcher employed a mixed research design to explore three questions concerning teachers in K-12 virtual settings. The first question detailed the virtual teachers' curriculum orientations. The second questioned compared the curriculum orientations of the virtual teachers to an existing group of brick-and-mortar teachers to see if there were any significant differences due to the educational environment. The final question explored the virtual teachers' perceptions of the curriculum used online. This included an online semistructured interview with a sub sample of 10 virtual teachers in order to gather in-depth narratives of their perceptions, experiences, training and professional development, instructional control, and control over curriculum choices.

Three online instruments and an interview were used in this study to measure six curriculum orientations commonly referenced in the extant literature: Academic Rationalist, Behavioral/Technological, Cognitive Processes, Eclectic, Humanist, and Social Reconstruction (Mahlios et al., 2007). The primary instrument used was the Modified Curriculum Orientations Instrument (Modified-COI) (Mahlios et al., 2007) (see Appendix A). The second instrument

included two parts called Forced-Choice with Descriptors, developed by the researcher (Appendix B). The first section of the instrument, Forced-Choice, is referred to as the second instrument. The second section of the instrument, Descriptors, is referred to as the third instrument. Interviews were conducted after all three instruments were administered to the virtual teachers. Interview questions are located in Appendix C. All quantitative analyses for this study were based on data collected from these instruments. The following research questions were addressed in this study:

1. What are the curriculum orientations of K-12 public school teachers in virtual settings?

2. In particular, are the curriculum orientations of teachers in virtual school settings similar to or different from the comparable teachers in brick-and-mortar settings?

3. What are the teachers in virtual settings perceptions of curriculum in online learning?

In this chapter, discussion, conclusions, limitations, and future research are addressed.

Discussion

Technology advancements in our fast-changing society have produced many opportunities for communicating using the Internet. As more individuals gain access to high-speed Internet, barriers to accessibility of information are erased. This provides a space for education to be delivered using the Internet. Within the last four years, there have been virtual schools and programs opening in every state. There are now more choices for K-12 education. In order to meet the demand of learning in this environment, teachers must be able to provide high quality education. Most teachers with experience teaching virtually did not learn to do so in a teacher preparation program, nor have they experienced virtual education as K-12 students (Kennedy, 2012). Virtual teachers repeatedly express the opinion that they should be fast learners and able to use technology effectively when they first begin teaching online.

Curriculum providers are no longer expected to develop materials for use only in a face-to-face environment. Curriculum must be created for virtual environments as well. These curriculum providers create curriculum based on specific aims for different constituents. Practicing virtual teachers must implement the curriculum provided or create their own. All teachers develop concepts of curriculum (Eisner & Valence, 1974; McNeil, 1996). It is also referred to as curriculum orientations, which are the beliefs about what schools should teach, how teachers decide to implement instruction, and how students should learn (Cheung, 2000; McNeil, 1996; Pajares, 1992).

Curriculum orientations awareness included during teacher preparation provides teachers an opportunity to explore tacit beliefs, to challenge implicit assumptions, and to situate their emerging practice in the brick-and-mortar as well as the virtual learning environment prior to teaching professionally. At the same time, curriculum exploration for curriculum goals would provide an experience comparing and contrasting their curriculum orientation against the aim. A teacher could have a curriculum orientation that is different from the curriculum aim they are using to teach. A difference in the curriculum aim and the teacher's curriculum orientation does occur in teaching environments, regardless of settings (Cheung & Wong, 2002). The results of this study also show what happens in a virtual setting when differences are present between the two. The virtual teachers modified the curriculum to fit the individual situation when necessary and have more control over what instructional activities students received. Therefore, when there is a difference in the curriculum written for virtual settings and a teachers' curriculum orientation, the teacher reverts to what works best for the situation along with the curriculum requirements.

Conclusion

The first question identified the curriculum orientations of teachers in virtual settings. The second question compared the curriculum orientations of teachers in virtual and brick-and-mortar settings for differences. The Modified Curriculum Orientation Instrument was the instrument used to explore both questions (Mahlios, et al., 2007). The third question focused on uncovering teachers' in virtual settings perceptions of online curriculum.

Question 1: What are the curriculum orientations of K-12 public school teacher in virtual settings?

This study found that teachers in virtual settings (virtual teachers) generally represent all of the curriculum orientations when using the Modified-COI. Mean scores for all six of the curriculum orientations show that virtual teachers' views of curriculum are distributed across every curriculum orientation to some degree. The results obtained in this study indicate that the virtual teachers' preferences using the Modified-COI were Cognitive Process. The findings of the correlations support the claim that virtual teachers favor certain curriculum orientations more than others. In Cheung's (2000) study of curriculum orientations, teachers tended to choose Academic Rationalist, Humanist, and Behavioral/Technological more often. A copy of the instrument is found in Appendix A.

The curriculum orientation with the lowest mean score, Social Reconstruction, likely indicates that virtual teachers do not strongly share its view of curriculum. The results shown are in line with similar studies using the Modified-COI (Crummey, 2007; Mahlios et. al, 2007; Foil, 2008; Reding, 2008) that support that teachers do not strongly perceive Social Reconstruction as a curriculum orientation that represents their views. One might believe this curriculum orientation has not been fully implemented and researched for teachers to have a strong

preference for it. Social Reconstruction is not a strong choice, as it has not been tried on a large scale in any country

When using the Forced-Choice with Descriptors instrument, the grade level taught indicated differences between the two group of virtual teachers, K-8 and 9-12.   The differences could stem from a number of items such as how the questions on the instrument were interpreted, teacher beliefs, teaching models, instructional methods, and assessments.

As such, Cognitive Process was the preferred curriculum orientation of K-8 teachers and Behavioral/Technological was preferred more by 9-12 virtual teachers. A likely rationale is most teachers in elementary settings are more concerned with the needs and interest of students and they are motivated to assist with the development of cognitive and affective skills. For the majority of the K-8 schooling, education is mostly student-focused in order for the student to learn, explore, and develop personally. The participants interviewed in the elementary grades specifically stated words such as "growth, needs of students, interest, higher order thinking, and creativity."

The opposite is true with secondary educational settings. Secondary teachers are normally trained in a specific content area, which leads to adhering to standards, benchmarks, and objectives. These teachers are more interested in students mastering learning objectives in preparation for state assessments. Assessment plays a major role in secondary education and teachers are under pressure to adhere to teaching what is necessary by using short attainable benchmarks. These teachers spoke highly of "knowledge of context, assessments, subject skills, standards, and mastering materials." Therefore, the significant differences between the two groups can be explained logically. It is was not an absolute discovery for all teachers interviewed as some teachers taught in both settings, but the majority of them fit into the

categories. From the results of the study, differences are still seen amongst the six curriculum orientations of virtual teachers.

Other studies conducted by Cheung and Wong (2002) and Jenkins (2006) show that Behavioral/Technological and Humanist curriculum orientations are more typical of modern day teachers. In the current study, the Behavioral/Technological curriculum orientation was the next highest, followed by Eclectic. None of the previous research on curriculum orientations (using a version of the COI) showed Eclectic as being one of the top three favored orientations. This result could indicate that virtual teachers' curriculum orientations are to some extent contextualized, a defining feature of eclecticism. This finding suggests that it could be productive to revisit Schwab's ideas of an Eclectic approach to curriculum (Schwab, 1970). Eclectic as a preferred curriculum orientation choice is hard to substantialize because a teacher usually does not truly have an eclectic view of curriculum. This would suggest that teachers have a solid curriculum orientation and do not change or select elements from the other five curriculum orientations.

Question 2: In particular, are the curriculum orientations of teachers in virtual school settings similar to or different from the comparable teachers in brick-and-mortar settings?

This study used a previous sample of brick-and-mortar teachers as a comparison. The sample of brick-and-mortar teachers was matched to the sample of virtual teachers using the variables of gender and age. This was done to find 47 participants out of the 247 that matched virtual teachers. The mean scores for curriculum orientations indicate virtual teachers favor all six curriculum orientations to some extent, which parallels results found among the sample of brick-and-mortar. A mean score comparison for the curriculum orientations between virtual teachers and brick-and-mortar teachers demonstrate a significant difference for only one

orientation, Social Reconstruction. This is an interesting discovery in the research. Brick-and-mortar teachers reported a higher mean score. This could be due to the fact that teachers in this setting would like to see the students have more real-world exposure to problems and have the opportunity to find creative ways to solve local issues. Therefore, teachers in virtual settings are not consumed with specifically teaching for assessment and have some areas to modify the curriculum to include problem-based learning. Thus, is would appear that overall virtual teachers and brick-and-mortar teachers are relatively similar in their conceptions of curriculum.

A rising issue in K-12 virtual education lies with the question of training needed to teach online. Literature supports the notion of teacher preparation programs offering instruction on teaching and learning online.

For virtual teachers, it raises the concern of how to train teachers to work in an online environment using the provided curriculum with an understanding of how to best implement it to fit the needs of the students. This would support the findings that teachers should be exposed to virtual settings in order to be an effective teacher (iNACOL, 2011). For brick-and-mortar teachers, it raises questions on the importance of training to teaching virtually.

Question 3: What are the teachers' in virtual settings perceptions of curriculum in online learning?

Quantitative. Results for the online Forced-Choice with Descriptors survey revealed that participants most favor the Humanist orientation out of the six curriculum orientations. One could assume that teachers value assisting students with the development of social, emotional, and academic skills during a time where accountability is the main focus in schools. Comparing the skewed results of the survey choices to the interview participants, the majority chose Behavioral/Technological as their personally favored curriculum orientation. Perhaps, as

teachers become oriented to working in virtual environments, which are characterized by a focus on standards and assessment, it begins to overshadow their prior beliefs and conceptions of curriculum. However, the relatively small number of interviewees limits considering this finding as a possible trend.

The Descriptors section on the Forced-Choice instrument used to identify the curriculum used in the virtual school/program indicated almost all 20 teachers in the sample chose Academic Rationalist as the dominant choice. The 10 interview-participant sample selected Behavioral/Technological more often as the curriculum used. Both curriculum orientation choices disregard the needs of the students, characteristic of the Humanistic orientation, and emphasize curriculum organized around measurable objectives. These choices are based solely on the participants' own perception of the curriculum and not the stated goals and principles of the curriculum they are using for instruction. Previous studies support the idea that Academic Rationalism is the dominant curriculum focus used to date because of its traditional values of content comprehension and teacher-centeredness. The quest to identify the factual curriculum aim was dropped based on prohibited access to virtual school/program curriculum. It is not conclusive that the participants are able to evaluate curriculum using the six curriculum orientations.

The Ideal Curriculum was also explored using the Descriptors section of the instrument. The majority of all 20 teachers in the sample chose Humanist as the dominant curriculum of choice. It is important to note that the Humanist curriculum is student-centered and takes into account the whole-child and educational equality for all students. Using this same instrument, interview participants selected Cognitive Processes more often as their ideal curriculum. This sample seeks to develop student's thinking abilities and cognitive skills. This shows all teachers

place value on student-centeredness and would select Humanist or Cognitive Processes if given the opportunity. This supports the findings that Humanist had the highest mean score in a study conducted by Jenkins (2006). However, the combination appeals to some teachers for implementing curriculum and making decisions.

Interviews. The major foundation of this study was exploring the curriculum orientations of virtual teachers. Fortunately, all teachers expressed beliefs concerning the ways in which curriculum should be designed and implemented. They indicated a high value for making instructional decisions that fit the framework provided by particular curriculum.

Orientations. Interviews provided insight into the background and instructional decision-making processes of a selection of virtual teachers.

All teachers willingly volunteered their time to participate in both online surveys and the interview. During the interviews, each one provided thought-provoking responses that told their unique stories, using the semistructured interview prompts to open a gateway into their worlds. Narratives were both wide and deep, ranging from professional topics such as career pathways to personal issues such as the effects of recent additions to the family.

Commonalities. Due to the small sample size, the task of identifying themes was relatively straightforward. Teacher perspectives showed many common features. Most prominent from among their narratives was their repeatedly expressed care for and commitment to students and their families. During interviews, all teachers indicated a strong passion for providing the best learning environment to each individual student. This was best exemplified when they were asked about the attraction to virtual education. Personal histories were surprisingly self-revealing and lengthy. When it comes to modifying the curriculum for students, only one teacher was dissatisfied with the level of control provided to make changes for students

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when needed. This teacher shared frustrations with administration's apparent resistance to change through creating roadblocks and red tape when alternative curricular decisions are needed. For example, a participant described specific instances when a parent personally asked for additional material or alternative assignments, only to be told it was not allowed "due to school policies." Despite ensuing friction with the administration, the participant reported continuing to advocate for the student's needs because "the fight is worth it."

The teachers shared a desire to teach in an online setting. Their histories reveal a pattern of taking risks related to professional opportunities. For example, participants commented that accepting a position that does not already have a roadmap could be scary and exciting at the same time. When compounded with learning a new way of teaching (doing something that one has done in the same way for many years), that can spell disaster to some. In contrast, the comments of this group of virtual teachers showed that they saw it as an opportunity. The majority of the teachers reported "jumping" right into teaching virtually, with no training, no support, and no experience – and that they "took off running." A few of the participants described themselves as " trailblazers" in their school/program. They indicated that they are now regarded as seasoned virtual teachers with a lot of knowledge on best practices used in teaching online, and that they know what works. They reported that they are able now to help new teachers become successful, and that they were positive about providing this support.

All of the teachers interviewed described taking into account the needs of the student. What is worth noting is many of them reported having a background working with students with exceptionalities or at-risk populations. References to educating "the whole child" are not uncommon and providing equitable educational opportunities is a goal for many teachers. One participant shared an experience that made a noticeable difference in a student's educational

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experience. The teacher was able to identify the student who was struggling to keep up with

assignments and was not attending required videoconferences. Because the student lived in

another part of the state, the teacher was not able to meet physically with the student or the

parents to discuss progress. Attempts were made to contact the parents to no avail. Nothing

seemed to be working and the teacher was very worried. Due to this participant's research skills

and experience using technology, the teacher conducted a Google search on both parents and

uncovered important information that provided insight into the student's issues and barriers.

This provided an opportunity for the teacher to jump in, provide assistance and a short-term

solution and support for the student. "I have never experienced anything of that nature and can't

imagine a child going through that," stated the teacher. At the end of the story, the teacher

shared that the student was able to get back on track, and that the student's living situation had

improved.

After all interviews were completed, transcribed, and analyzed, the messages were that

the most important qualities of being a teacher, regardless of the environment, is the care shown

to others, the ability to communicate effectively, the ability to be creative and think on one's

feet, to always be ready to learn something new, and to be ready for change. Each virtual teacher

took time out of their days to contribute their stories in hopes that more studies will be conducted

to understand virtual education through the eyes of the teacher.

Limitations
Limitations of this study included the need to increase both sample sizes to increase the

statistical power of the analyses. For example, a larger sample size is needed to reduce

confidence intervals (Cohen, 1988). Regarding sample size required for a high-quality study, a

mechanism should be available at the State's Department of Education to provide accurate totals

of virtual teachers in each virtual school/program. This information would be helpful to know

when establishing the sample population. Information was not readily available in one centralized location. Due to the lack of a database, the call for participants was emailed to all virtual school/program directors within the state with the hope the request was forwarded to all virtual teachers. Many virtual schools/programs listed on the active list compiled by the Department of Education did not have a website, the contact information was incorrect, or the virtual school/program no longer existed or never existed. Once a method for identifying the sample population for the state is created, the study can expand to include other states using both online instruments, the Modified-COI (Mahlios, et al., 2007) and the Forced-Choice with Descriptors, as well as studying other variables of interest.

Using a mixed-methods research design could be another limitation. The interview questions provided essential texture to the study, but were limited to only those who volunteered. The interview questions protocol focused more on the perception of online curriculum; thus, only one question pertained directly to the research questions focusing on orientations. However, the additional questions provided added support for indicators of perceptions. The survey instruments were the only source for quantitative data and had a relatively low response rate for participants solicited for the second survey.

Both instrumentations provided different findings, which made it difficult to identify dominant curriculum orientations and establish a standard profile for all six orientations. The Modified-COI showed significant differences between the two groups for the Social Reconstruction orientation using mean scores. This data do not align with other studies using the same instrument (Cheung & Wong, 2002; Jenkins, 2006). Although the correlations indicated a moderate relationship, three showed no correlations. When identifying the favored curriculum orientation of virtual teachers, results showed Cognitive Process. However, Humanist was the

favored curriculum orientation identified using the Forced-Choice with Descriptors instrument. This instrument's goal was to provide one distinct curriculum orientation to create a standard profile to help guide future research. Unfortunately, the Forced-Choice with Descriptors instrument requires more construct validity research. Many participants indicated the curriculum orientation of Eclectic during interviews. Virtual teachers consistently mentioned taking into the consideration the needs of the family, student, and location as it pertains to the learning opportunities. Teachers worked with administrators and parents to do what was best for the student and use assessment tools that take into account the abilities and student situations.

Future Research

This study sought to explore the curriculum orientations and perceptions of curriculum of K-12 public virtual teachers. Results of the study provided some insight on how virtual teachers view curriculum. Using the survey instruments did not provide a clear preference for a curriculum orientation, which needs to be addressed. However, there are other questions to explore due to the interview data gathered from virtual teachers.

Future researchers are challenged to address the divergence between the two ways of delivering education, online and brick-and-mortar. This study's findings indicated no differences in curriculum orientations. What is not addressed in the study is how the absence of training affects teaching online. A discussion on implementing virtual education experiences at the level of preservice training is needed by newly admitted students in particular. Any discussion to familiarize preservice teachers with virtual education would be a move in the right direction. More K-12 schools are adding a virtual component to provide choice to students, which might call on preservice teachers to teach them.

Identifying the curriculum orientation of online curriculum could be another study that would focus on curriculum aims. The study would then compare the curriculums to teachers'

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ideal curriculum for similarities. The teachers could be interviewed to share their reasoning for choosing the ideal curriculum. The identification of curriculum aims in online curriculum could be studied closely in teacher preparation programs for curriculum exposure and experience. Comparing the curriculum aims to the curriculum orientations of virtual teachers and using curriculum descriptors to choose current curriculum would provide the research missing from the present study, which was unable to verify curriculum aims.

Another opportunity would be to gain insight into how virtual teachers make curriculum decisions using a qualitative study. The goal would be to report findings on thinking patters associated with decisions. The researcher could shadow the virtual teacher over the school year to have a more complete representation of how decisions are made. Virtual teachers would provide their thinking pattern and steps taken when making a curriculum decision, providing answers to questions such as:

- What led you to try that?

- Explain your rationale for that action.

- What influenced you decision?

The researcher could understand the thinking of the virtual teacher and attempt to make the same decisions and compare them to the actual decision made. The researcher would have full access to the virtual classroom and the same administrative rights as the teacher to immerse oneself in the experience. Maybe the length of the study could provide factors teachers use in making decisions.

Summary

This study explored and answered the three research questions and provided guidance on what areas should be further researched. The study aimed to identify the curriculum orientations of virtual teachers. It was decided that Cognitive Process was the most favored curriculum

orientation. Interviews with virtual teachers who identified with this orientation or chose it for their ideal curriculum desired to teach students to become critical thinkers and differentiated instruction the most for students. Comparing virtual teachers to brick-and-mortar teachers showed that most teachers are similar in how they view curriculum. Virtual teachers interviewed provided evidence that they are similar in their thinking to teachers working in brick-and-mortar settings. Looking at the perspectives of online curriculum was especially informative. According to participants' reports, it would seem that the majority of published online curricula can easily be modified, and that teachers working in virtual settings have the control to do so. However, teachers would like to change these popular packages to include more opportunities to develop learners' creative thinking skills, to nurture the development of the whole child, and to tackle societal problems. The next step is to continue to explore the emerging field of virtual education, especially from the teaching perspective.

REFERENCES

Archambault, L. (2011). The practitioner's perspective on teacher education: Preparing for the K-12 online classroom. *Journal of Technology and Teacher Education, 19*(1), 73-91.

Archambault, L. & Crippen, K. (2009). K-12 Distance Educators at Work: Who's Teaching Online Across the United States. *Journal of Research on Technology in Education, 41*(4), 363- 391.

Association for Supervision and Curriculum Development. (2008). *Technology Pumps Up the Learning Experience.* Retrieved from http://www.ascd.org/ascd-express/vol4/402-podolski.aspx.

Babin, P. (1978). A curriculum orientation profile. ERIC ED 164613.

Carroll, W. (1997). Technology and teachers' curriculum orientations. *Educational Horizons, 75*(2), 66-72. ERIC EJ537133.

Cheung, D. (2000). Measuring teachers' meta-orientations to curriculum: Application of hierarchical confirmatory factor analysis. *The Journal of Experimental Education, 68*(2), 149-165.

Cheung, D. & Ng P. (2002). Science teachers' beliefs about curriculum design. *Research in Science Education, 30*(4), 357-375.

Cheung, D. & Wong, H. (2002). Measuring teacher beliefs about alternative curriculum design. *The Curriculum Journal, 13*(2), 225-248. doi: 10.1080/09585170210136868.

Christensen, C. M., & Horn, M. B. (2008). How do we transform our schools. *Education Next*, *8*(3), 13-19.

Clark, T. & Oyer, E. (2012). *How can SEAs use digital technologies in support of education reform? A white paper.* Carmel, IN: EvalSolutions Inc. and Illinois State Board of Education.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. (2nd ed.). New York, NY: Routledge Academic.

Compton, L., Davis, N. & Mackey, J. (2009) Field experience in virtual schooling - To be there virtually. *Journal of Technology and Teacher Education, 17*(4*), 459-477.

Cunningham, R., Johnson, J., & Carlson, S. (1992, December). Curriculum orientations of home economic teachers. Paper presented at the American Vocational Association Convention, St. Louis, MO.

Cyrs, T. E. (1997). Competence in teaching at a distance. In T. E. Cyrs (Ed.), *Teaching and learning at a distance: What it takes to effectively design, deliver, and Evaluate programs* (pp. 15-18). San Francisco: Jossey-Bass. doi: 10.1002/tl.7102

Davis, N. E. & Ferdig, R. (2009). Editorial: What is special about teacher education for virtual schooling? *Journal of Technology and Teacher Education*, *17*(4), 203-214.

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), 399–408.

Davis, N. E. & Rose, R. (2007). *Report on professional development for virtual schooling and online learning.* Vienna, VA: iNACOL.

Davis, N. E., & Rose, R. (2007). *Professional development for virtual schooling and online learning.* Research committee issues brief. Vienna, VA: iNACOL.

Dipietro, M., Ferdig, R., Black, E., & Preston, M. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. *Journal of Interactive Online Learning, 7*(1), 10-35.

Easton, S. S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education, 52*(2), 87–105. doi:10.1080/03634520302470.

Eisner, E. W. (1985). *The educational imagination*. New York: Macmillan.

Eisner, E. W., and Vallance, E. (Eds.) (1974) *Conflicting conceptions of curriculum*. Berkeley, CA: McCuthchan.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Piscataway, NJ: Aldine Transaction.

Hassel, B. C., & Terrell, M. G. (2004). *White paper: How can virtual schools be a vibrant part of meeting the choice provisions of the No Child Left Behind Act?* Retrieved from http://www.vdoetest.vi.virginia.gov/federal_programs/ esea/title1/part_a/how_can_virtual_schools.pdf.

International Association for K-12 Online Learning (iNACOL). (2011). National standards for quality online teaching. Retrieved from http://www.inacol.org/resources/publications/inacol-reports/#3899.

International Association for K-12 Online Learning (iNACOL). (2009). What can congress and the federal government do to promot quality online learning opportunity for all students? Retrieved from http://www.inacol.org/resources/publications/inacol-briefing-papers/.

International Association for K-12 Online Learning (2008). *National Standards for Quality Online Teaching*. Retrieved from http://www.inacol.org/resources/nationalstandards/NACOL%20Standards%20Quality%20Online%20Teaching.

International Society for Technology in Education (2008). *National Educational Technology Standards (NETS*T) and Performance Indicators for Teachers*. Retrieved from http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_for_Teachers_2008.htm.

International Society for Technology in Education (2008). *What Works in K-12 Online Learning*. Retrieved from www.iste.org/docs/excerpts/K12OLL-excerpt.pdf.

Interstate Teacher Assessment and Support Consortium. (2011). *Model coreteaching standards: A resource for State dialogue*. Retrieved from http://www.ccsso.org/Resources/Publications/InTASC_Model_Core_Teaching_Standards_A_Resource_for_State_Dialogue_%28April_2011%29-x1025.html.

Jenkins, S. (2006). *Measuring Teacher Beliefs about Curriculum Orientations Using the Modified-Curriculum Orientations Inventory*. Unpublished dissertation. The University of Kansas, Lawrence, KS.

Jenkins, S. (2009). Measuring teacher beliefs about curriculum orientations using the modified-curriculum orientations inventory. *The Curriculum Journal, 20*(2), 103-120. doi: 10.1080/09585170902948798.

Johnson, B., & Turner, L. A. (2003). Data collection strategies in mixed methods research. In A. Tashakkori & C. Teddue (Eds.). *Handbook of mixed methods in social and behavioral research* (pp. 297-319). Thousand Oaks, CA: Sage.

Kansas State Department of Education. (2009). *Virtual schools*. Retrieved from http://www.ksde.org/Default.aspx?tabid=455.

Kennedy, K. (2010). *The essence of the virtual school practicum: A phenomenological study of pre-service teachers' experiences in a virtual school*. Unpublished dissertation. University of Florida, Gainsville, FL.

Kennedy, K. & Archambault, L. (2012). Offering pre-service teachers field experiences in K-12 online learning: A national survey of teacher education programs. *Journal of Teacher Education*, *63*(3), 185-200. doi:10.1177/0022487111433651.

Lichty, M. & Johnson, J. (2006). A follow-up study: The examination of teaching beliefs and its

influence on curriculum orientation decisions. *Journal of Family and Consumer Sciences Education, 24*(2), 36.

Mahlios, M., Friedman-Nimz, R., & Peyton, V. (2007). Curriculum orientation inventory, unpublished instrument, University of Kansas, Lawrence, KS. Received via electronic mail.

McNeil, J. D. (1977). *Curriculum: A Comprehensive Introduction.* Boston: Little Brown.

McNeil, J. D. (2006). *Contemporary Curriculum in Thought and Action*. Hoboken, NJ: Wiley Jossey-Bass.

Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco, CA: Jossey-Bass.

Merriam-Webster. (2009). *Merriam Webster's collegiate dictionary*. Springfield, MA: Author.

National Council for Accreditation of Teacher Education (NCATE). (2008). *Professional Standards for the accreditation of teacher preparation institutions.* Retrieved from http://www.ccsso.org/Resources/Publications/ InTASC_Model_Core_Teaching_Standards_A_Resource_for_State_Dialogue_%28April _2011%29-x1025.html.

National Council for Accreditation of Teacher Education. (2008). *NCATE Standards 2008*. Retrieved from http://www.ncate.org/documents/standards/NCATEStandards2008.pdf.

National Education Association (NEA) (2006). *Guide to teaching online courses*. Washington D.C.: NEA. Retrieved from http://www.nea.org/assets/docs/onlineteachguide.pdf.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*. *62* (3), 307-332.

Pinar, W. F. (1978). Notes on the curriculum field 1978. *Educational Researcher*, *7*(8), 5-12.

Rice, K. (2006). A comprehensive look at distance education in the K-12 context. *Journal of Research on Technology in Education, 38(4),* 425-448.

Roblyer, M. D. (2006). Online high-school programs that work. *The Education Digest*, *72*(3), 55-63.

Roblyer, M. D., & Elbaum, B. (2000). Virtual learning? Research on the status of virtual high schools. *Learning and Leading With Technology, 27*(4), 58-61.

Salmani Nodoushan, M. A. (2008). A critique of the brave new world of K-12 education. *Online Submission*, *4*, 1-5.

Schwab, J. (1970). *The practical: A language for curriculum.* Washington, D.C.: National
 Education Association.

Schubert, W. H. (1987). *Curriculum: Perspective, paradigm, and possibility.* Riverside, NJ:
 Simon and Schuster.

Smith, R., Clark, T., & Blomeyer, B. (2005). A synthesis of new research on K-12 online
 learning. Naperville, IL: Learning Point Associates. Retrieved from
 http://www.riversidevirtualschool.net/RVS/Website/Publications/Online%20Teaching%2
 0and%20Learning/A_Synthesis_on_New_Research_on_K-12_Online_Learning.pdf

Southern Regional Education Board (SREB). (2003). *Essential Principles for High Quality
 Online Teaching.* Retrieved from http://www.sreb.org/page/1295/.

Southern Regional Educational Board. (2006). *SREB essential principles of high-quality online
 teaching: Guidelines for evaluating K-12 online teachers.* Retrieved from
 http://www.sreb.org/programs/edtech/ pubs/PDF/Essential_Principles.pdf.

Watson, J., Gemin, B., Ryan, J., & Wicks, M. (2009). *Keeping Pace with K-12 Online Learning.*
 Evergreen, CO: Evergreen Education Group.

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2011) *Keeping pace with K-12
 online learning: An annual review of policy and practice.* Evergreen, CO: Evergreen
 Education Group.

Yin, R. (2003). *Case study research: design and methods.* Thousand Oaks, CA: Sage
 Publications.

APPENDICES

Appendix A
Modified-COI

Curriculum Orientation of Virtual Teachers Informed Consent Statement

The University of Kansas and the Department of Curriculum & Teaching support the practice of protection for human participants in research. The following information is provided so that you can decide whether you want participate in the present study. Even if you agree to participate, you are free to withdraw at any time without prejudice. Each consenting participant will be asked to contribute between 15 minutes to 1 hours of time to the study, as explained below. No risks are anticipated. Participants completing the study will receive a small gift of appreciation for their time and be included in 2 drawings for a $50 gift certificate to Amazon.com.

The purpose of the research project is to explore how K-12 teachers in virtual settings view curriculum and identify their curriculum orientation. The results will be compared to teachers in brick-and-mortar settings to see if the views on curriculum are different. In addition, I would like to interview you to obtain your views on how you decide to teach the curriculum in your virtual school/program. You have no obligation to participate and you may discontinue your involvement at any time.

By completing the online survey, you are consenting to (a) answer the survey in its entirety (b) if selected, to completing a second short online survey (c) if selected, to complete a third short online survey (d) if selected, engaging in an online interview to gather more information.

Although names of participating individuals will be collected, they will not be used in any written reports on findings of the study. Diligent effort will be made to preserve the anonymity of participants. Permission granted on this date to use and disclose your information remains in effect indefinitely. By completing the survey you give permission for the use and disclosure of your information for purposes of this study at any time in the future.

Participation in the online survey and/or interview indicates your willingness to take part in this study and that you are at least 18 years old. Please note that your responses are very important for the virtual education field. If selected, you will be contacted to participate in a follow-up virtual interview.

Should you have any questions about this project or your participation in it you may ask me or my faculty supervisor, Dr. Reva Friedman-Nimz at the School of Education. If you have any questions about your rights as a research participant, you may call the Human Subjects Protection Office at (785) 864-7429 or email mdenning@ku.edu.

Nicole Singleton	Dr. Reva Friedman
Principal Investigator	Faculty Supervisor
Curriculum & Teaching Dept.	Curriculum & Teaching Dept.
321 JR Pearson Hall	349 JR Pearson Hall
University of Kansas	University of Kansas
Lawrence, KS 66045	Lawrence, KS 66045
785 864 9641	785 864 9724

We appreciate your cooperation very much.

Sincerely,

Nicole Singleton

Do you consent?
1. . Yes
2. No

Please answer the following question in **Column A** to the best of your ability filling in information in some places and selecting from the choices in others in **Column B**

	A	B
1.	Last Name	
2.	First Name	
3.	Email Address	
4.	Highest Level of Education	a. Bachelor's b. Masters's c. Doctorate
5.	Age	a. 22 or younger b. 23 to 30 c. 31 to 45 d. 46 to 65 e. 66 or older
6.	Heritage	a. Caucasian b. Latino/Latina c. African American d. Asian American e. Other
7.	Gender	a. Female b. Male
8.	School district where you currently work (if applicable)	
9.	Name of school/virtual program where you currently work	
10.	Current virtual grade level(s) taught	a. K-2 b. 3-5 c. 6-8 d. 9-12
11.	Virtual subject(s) taught (check all that apply)	a. Language Arts b. Art c. Music d. Social Studies (World History, Sociology, Economics, U.S. History, etc.) e. Math f. Foreign Languages g. Technology h. Science i. General Education j. Other k. Elective(s)
12.	What curriculum are you using in your virtual teach course? (K12, Aventa, Connections, district created, etc.)	
13.	What learning management system (LMS) are you using to deliver your virtual course(s)? (Blackboard, Moodle, etc.)	
14.	Overall Teaching Experience	a. 1 to 5 years b. 6 or more years
15.	K-12 Virtual/Online Teaching Experience	a. 0 to 1 year b. 2 to 4 years c. 5 or more years

	A	B
16.	Current Virtual/Online Teaching Assignment	a. Part-time virtual teaching b. Full-time virtual teaching c. Full-time brick-and-mortar teaching and another part-time virtual teaching position d. Blended or hybrid classroom e. Another educational related position and part-time virtual teaching f. A position outside of education and part-time virtual teaching Other

Please rate each item according to how well it represents your views about curriculum by selecting only one. Place a check mark in the box that best describes your view.

1= Does not represent my view at all   2=Minimally represents my view   3=Represents my view somewhat   4=Represents my view fairly well   5=Represents my view exactly

18.	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
During the teaching-learning process, it is important to give students opportunities to think about problems					
Selection of curriculum content and teaching strategies should be based on learning objectives					
When organizing curriculum teachers should focus on teaching specific cognitive skills and processes, for example, problem solving					
For curriculum design, the main function of instructional assessment is to find out the extent to which students have attained the intended learning objectives					
Curriculum should be tailored to the individual interests and experiences of each student					

18. (continued)	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
The basic goal of curriculum should be the development of students' cognitive skills, such as memorizing, hypothesizing, problem solving, analyzing and synthesizing, which can be applied to learning virtually anything					
The most important curriculum content for primary and secondary school students is subject knowledge					
Teaching should focus on a set of predetermined learning objectives					
Assessing student learning should emphasize their decision making skills, abilities and choices in the particular situations they encounter in life					
Subject knowledge is the basis for designing a high-quality school curriculum					

Please rate each item according to how well it represents your views about curriculum:

1= Does not represent my view at all   2=Minimally represents my view   3=Represents my view somewhat   4=Represents my view fairly well   5=Represents my view exactly

19.	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Existing problems in our society, such as pollution and the population explosion, should be the organizing center of curriculum					

19. (continued)	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Curriculum should stress refinement of students' intellectual abilities through the study of academic subject matter					
Students learn best when permitted to analyze, investigate and evaluate authentic societal problems					
Curriculum planning should require teachers to begin with the unique context in their school and seek ways to be helpful in dealing with local needs and problems					
Curriculum should require teachers to teach thinking skills					
During the teaching process, teachers should frequently check whether students are provided with opportunities to integrate their learning holistically					
Curriculum decisions about what to teach should be based on concrete, practical situations in the local context					
Students' personal interests and needs should be the organizing center of curriculum					
It is important to determine the degree to which students have acquired academic subject knowledge					

19. (continued)	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Curriculum organization should be governed by learning objectives					

Please rate each item according to how well it represents your views about curriculum:

1= Does not represent my view at all   2=Minimally represents my view   3=Represents my view somewhat   4=Represents my view fairly well   5=Represents my view exactly

20.	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Students learn best in a learning environment filled with love and emotional support					
Assessing students' levels and forms of thinking as well as their ability to explore knowledge is most important					
Curriculum content should focus on societal problems such as pollution, the population explosion, energy shortages, racial discrimination and crime					
Curriculum should require teachers to teach the most important subject matter to students					
Methods of inquiry are the most important content for primary and secondary school curricula					
Curriculum design should start with stating learning objectives					

20. (continued)	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Curriculum should let students understand societal problems and take action to establish a new society					
Increasing students sense of personal meaning and sense of direction in life is a major purpose of schooling					
The most important goal of the school curriculum is to foster students' ability to critically analyze societal problems.					
In addition to academic achievement, instructional assessment should also emphasize students' personal development, such as self-confident, motivation, interests and self-concept.					

Please rate each item according to how well it represents your views about curriculum:

1= Does not represent my view at all   2=Minimally represents my view   3=Represents my view somewhat   4=Represents my view fairly well   5=Represents my view exactly

21.	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Assessment of students should focus on their abilities to identify relevant social problem and solutions to them					

21. (continued)	1= Does not represent my view at all	2= Minimally represents my view	3= Represents my view somewhat	4= Represents my view fairly well	5= Represents my view exactly
Teachers should select curriculum content based on students' interests and needs					
A central goal of the curriculum should be student's attainment of practical reasoning					
Instructional activities should be systematically designed to ensure student learning					
Allowing students to know significant works of art, literature, science, mathematics, technology, etc. should be a top priority of the school curriculum					
Curriculum development and planning in schools should be guided by practical, common sense processes					

Example with Curriculum Orientations

Question	1= Does not represent my view at all	2= Minimally represents my views	3= Represents my views somewhat	4= Represents my views fairly well	5= Represents my views exactly
16. Curriculum should stress refinement of students' intellectual abilities (Academic Rationalist)					
28. Curriculum design should start with stating learning objectives (Technological/Behaviorist)					
17. Students learn best when permitted to analyze, investigate, and evaluate					

authentic societal problems. (Social Reconstruction)				
19. Students interests and needs should be the organizing center of the curriculum (Humanist)				
29. A central goal of the curriculum should be students' attainment of practical reasoning. (Cognitive Processes)				
18. Curriculum should require teachers to teach thinking skills systematically. (Eclectic)				

Source: Modified Curriculum Orientation (Mahlios et al., 2007; Cheung & Wong, 2002)

Appendix B
Forced-Choice with Descriptors Instrument

Please rate in order the set of phrases that most describes our definition of curriculum. Choose "6" if the phrase is most like your view. Choose "5" if the phrase is next, "4" to the next, and so on. Choose "1" if the phrase is least like your view. Each phrase should have a different number selection. Please rank each going horizontally.

Forced-Choice 6 Sections

Section1	Section2	Section3	Section4	Section5	Section6	Total
Provide students with the knowledge, skills, and values within the context of the major academic disciplines	Enhance each student's cognitive and affective development by emphasizing personal meaning	Develop and nurture the full range of thinking and learning processes such as memorizing, hypothesizing, problem solving, analyzing, synthesizing, and evaluating	Foster students' critically ability to analyze social problems and to provide them with the skills, values, and knowledge to that lead to generating viable solutions	Driven by standards, benchmarks, and objectives	Practical reasoning within the local context and its relevant historic, demographic, political, social, and economic characteristics	
Traditional academic subject matter	Addressing students' interest and needs	Students' master of cognitive skills	Foster students' critically ability to analyze social problems	A deep understanding of how to break subjects down into measurable segments	Provide equitable and relevant learning opportunities within the concrete, practical situations of the local school context	
Teachers need a deep understanding of their academic discipline	Teachers need a deep understanding of cognitive and social development	Teachers need a deep understanding of critical and creative thinking and related learning strategies	Teachers need a deep, multidisciplinary understanding of social issues	Teachers need a deep understanding of how to break subjects down into measureable segments	Teachers need a deep understanding of how to design and develop curriculum n a collaborative and inclusive process involving teachers, policy makers, and administrators, parents and students, and local community	

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Section1	Section2	Section3	Section4	Section5	Section6	Total
					members	
Select and employ instructional strategies pertinent to specific disciplines	Student-centered and foster individual growth according t each students' unique profile of intellectual, social, emotional, and physical characteristics	Instruct student systematically about how and when to use particular processes and strategies	Students as partners in socially oriented problem-based learning	Instructional strategies to help learners attain the prescribed learning indicators by the most efficient means	Personal meaning and practical reasoning to applicable problems	
Determine the extent to which students have acquired content knowledge and discipline-based thinking	Provide feedback to teachers and their students concerning the learner's personal development	Evaluate students' cognitive proficiencies and forms of thinking	Evaluate civic awareness, problem-solving skills, and decision-making skills in social contexts	Determine the extent to which students have mastered the intended learning objectives	Evaluate the degree to which learners generalize and transfer decision-making skills and abilities to a range of current and future situations	

Below are six commonly accepted ways of conceptualizing school curriculum.
1. **Choose the one that <u>BEST DESCRIBES</u> the curriculum you are using now in your virtual school/program by placing the number 1 next to it.**
2. **Now review each descriptor again, assuming no limitations, now choose one of the 6 descriptions of curriculum that best represents an <u>IDEAL Curriculum</u> by placing the number 2 next to it.**

<u>CURRICULUM A</u>-

The curriculum consists mainly of traditional academic subject matter, such as mathematics, science, literacy and so on. Its purpose is to provide students with the knowledge, skills, and values within the context of the major academic disciplines (e.g. mathematics, science, history, etc.). In order to implement this curriculum well, teachers need a deep understanding of their academic discipline. Teachers select and employ instructional strategies pertinent to specific disciplines. Assessment is used to determine the extent to which students have acquired content knowledge and discipline-based thinking.

<u>CURRICULUM B</u>-

The curriculum is organized around addressing students' interests and needs. Its purpose is to enhance each student's cognitive and affective development by emphasizing personal meaning. In order to implement this curriculum well, teachers need a deep understanding of cognitive and social development. Teaching and learning are student-centered and foster individual growth according to each student's unique profile of intellectual, social, emotional, and physical characteristics. Teachers provide opportunities for students to integrate their affective, cognitive, and psychomotor development. The primary purpose of assessment is to provide feedback to teachers and their students concerning the learner's personal development.

<u>CURRICULUM C</u>-

The curriculum is centered on students' mastery of cognitive skills. Its purpose is to develop and nurture the full range of thinking and learning processes such as memorizing, hypothesizing, problem solving, analyzing, synthesizing, and evaluating. In order to implement this curriculum well, teachers need a deep understanding of critical and creative thinking and related learning strategies. Teachers instruct student systematically about how and when to use particular processes and strategies. The goal of assessment is to evaluate students' cognitive proficiencies and forms of thinking.

<u>CURRICULUM D</u>-

The curriculum is designed to foster students' critically ability to analyze social problems and to provide them with the skills, values, and knowledge to that lead to generating viable solutions. Students are encouraged to create and participate in social, economic, and political processes that are exemplify the democratic and inclusive values that lead to societal improvement. In order to implement this curriculum well, teachers need a deep, multidisciplinary understanding of social issues. Teachers enlist students as partners in socially oriented problem-based learning. Assessment is used to evaluate civic awareness, problem-solving skills, and decision-making skills in social contexts.

CURRICULUM E-
Curriculum content, scope, and sequence are driven by standards, benchmarks, and objectives. In order to implement this curriculum well, teachers need a deep understanding of how to break subjects down into measurable segments.   Teachers use instructional strategies (e.g., mastery learning, direct instruction) to help learners attain the prescribed learning indicators by the most efficient means. The key function of assessment is to determine the extent to which students have mastered the intended learning objectives.

CURRICULUM F-
The aims of curriculum are to provide equitable and relevant learning opportunities within the concrete, practical situations of the local school context. The curriculum is focused on practical reasoning within the local context and its relevant historic, demographic, political, social, and economic characteristics. . In order to implement this curriculum well, teachers need a deep understanding of how to design and develop curriculum in a collaborative and inclusive process involving teachers, policy makers & administrators, parents and students, and local community members. Assessment is used to evaluate the degree to which learners generalize and transfer decision-making skills and abilities to a range of current and future situations.

Appendix C
Interview Questions

The following questions were used to explore the perceptions of curriculum orientations

as well as curriculums in online learning:

Curriculum Views

1.   Tell me about the curriculum you are currently using. Is it standardized, teacher made, or

scripted, meaning already there for you to execute to the student and you do not have to

design any of the lessons? If so, do you see a benefit in having it all laid out for you?

Would you rather have more influence on it?

2.   Tell me about a time when you modified the curriculum for the student(s) or to fit your

individual teaching needs. Can you modify the curriculum that is available to you? If so,

how do you modify the curriculum to fit your needs? Do you modify it to fit the needs of

your students?

3.   Do you think about curriculum and how did it evolve? How has your view of curriculum

changed as a result of working in a virtual environment as opposed to brick-and-mortar?

4.   I am curious to know what would you do if you ran into conflict with what the

curriculum wants you to do and what you feel your students need.

Curriculum Orientations

5.   How do you see your curriculum orientation being an advantage in the virtual

environment?

6.   How do you see your curriculum orientation being a disadvantage in the virtual

environment?

7.   What part of the curriculum orientation characteristics resonate with you and why?

8.   Please give me an example of how your orientation characteristics identifies with your thinking/beliefs.

Virtual Education

9.   I would like to know your story on how you became a virtual teacher.

10.   What attracts you to virtual education?

11.   I am curious to know if teaching virtually has met your expectations.

12.   What learning management system (LMS) do you use, if any? (Blackboard, Angel, Desire2Learn)

13.   In what ways is teaching online different from teaching face-to-face? In what ways are each satisfying? Frustrating?

14.   Given the flexibility you might have, share with me what have you been able to do that could be different from the brick-and-mortar environment? What kind of control do you have in a virtual environment that may be different in a brick-and-mortar?

Virtual Training

15.   Share with me the training you have received to teach online, how often you are trained, and how the trainings are conducted?

16.   Tell me about the professional development opportunities you have attended over K-12 online learning and any conferences you have attended.

17.   Tell me about your teacher preparation-training program for teaching online.