

THE IMPACT OF AUXILIARY SUPPORT SYSTEMS IN IMPROVING LEARNER
OUTCOMES IN AN ONLINE SCHOOL: A QUALITATIVE CASE STUDY

by

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I would like to dedicate this dissertation to my mother, Cheryl Baumbach, who has always been my biggest champion and cheerleader. Mom, you've always led by example displaying traits of positivity, optimism, energy, and a passion for public service; all traits you've instilled in your children. I have spent my life mom emulating these qualities and I am so indebted to you for your unwavering love and support.

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ABSTRACT

THE IMPACT OF AUXILIARY SUPPORT SYSTEMS IN IMPROVING LEARNER OUTCOMES IN AN ONLINE SCHOOL: A QUALITATIVE CASE STUDY

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Adviser: Julia Smith, Ed.D.

The purpose of this study was to examine the impact of auxiliary support systems in improving learner outcomes through a case study of one virtual school in a midwestern state. Mentor and teaching practices were researched and analyzed using the Community of Inquiry (CoI) theoretical framework. The research design was an evaluative case study where data were gathered from online teachers, mentors, and academic interventionists. The research sought to answer the questions, “Were online students more successful when they have an assigned mentor with whom to work?” and “How might we improve how we prepare our mentors (e.g. training, support, and professional development) to better serve our students?”

The practices and beliefs of two mentors, one academic interventionist, one special needs teacher, and four online teachers were studied using interviews, observations, and document analysis. I used the CoI’s three presences: social, cognitive, and teaching/mentor presence to examine mentors, interventionists, and online teachers in one K-12 public school district over the course of one semester. The location I selected has legislation that mandates that there is an assigned mentor for every student enrolled in an online class. Each staff member was asked to fill out surveys to gather pre and post semester data and participated in a sequence of interviews based on that information.

The findings from the study showed causal relationships between students' need for skilled and effective mentors and success in their online classes. They provided advising tools and resources, offered daily support and encouragement, helped troubleshoot technology issues, motivated frustrated students, and helped them stay organized. However, while mentors were assigned to online students as required by legislature, each of the participants had been "voluntold" of their mentoring roles and were left to figure it out on their own. The lack of time to complete their normal job duties along with mentoring students resulted in negative feelings. As a result, there were inconsistencies as to the effectiveness of the mentors. Further research is needed to identify practices of K-12 fully online teachers for all subject areas and to verify the applicability of the K-12 Community of Inquiry framework.

Keywords: K-12 online learning, Virtual school, Online school, Online Learning, Community of inquiry, 21st, Online teachers, mentors, academic interventionists, facilitators, two-way contacts

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CHAPTER ONE

INTRODUCTION

Overview

The ecosystem of K-12 education continues to evolve in the United States. With the advent of school choice initiatives, the influx of digital technologies, and virtual schooling options, students have more publicly funded choices and flexible learning opportunities than ever before. As a result, the number of students enrolling in online courses or participating in blended learning environments is growing at a rapid pace (Watson, Murin, Vashaw, Gemin, & Rapp, 2013).

Blended learning is a divergence from traditional face-to-face teaching methods as it combines online learning with face-to-face instruction. In blended learning models, teachers leverage technology to enhance, individualize, and personalize instruction, thereby giving students choice, flexibility, and anytime, anywhere access to learning (DiPietro, 2010).

According to the *Michigan's K-12 Virtual Learning Effectiveness Report*, 418,513 (29%) took at least one virtual course and 3,647,493 (79%) of Michigan public schools had virtual learners. Of those enrolled, only fifty-six percent of the students passed their courses. Students living in poverty accounted for 69% of enrollments and students who did not live in poverty accounted for 82% of the enrollments (Michigan Virtual, 2021, p. 3). These low passing rates indicate a need for on-site support systems for students learning in a virtual environment.

Evergreen Educational Group (2019) reported that in 2016 over 523,000 (84.39%) of high school students in 24 states enrolled in online courses. By 2019, 39 states provided online schooling options (Miron & Urschel, 2012; Molnar et al., 2019) and the demand for blended and online courses continues to gain traction. According to the Digital Learning Collaborative's (2020) *Review of K-12 Online, Blended, Digital Learning* report, online enrollments are growing by 6% per year. Picciano and Seaman (2011) attributed the rapid growth to the benefits blended learning affords students such as: access to courses otherwise unavailable to students; credit recovery courses; Advanced Placement classes; and offerings for students with individual needs that are unavailable in traditional classrooms. At the same time, high attrition rates are raising serious concerns for school districts. On average, Michigan students only passed 55% of their online courses compared to 78% pass rates in face-to-face classes (Borup, Chambers, & Stimson, 2019).

Emerging research identified several factors negatively impacting student success in online courses such as students feeling isolated and disconnected from their peers, limited or no on-site student support systems, and a lack of motivation in online students (Freidhoff, Borup, Stimson, & Debruler, 2015). Other studies have shown dropout rates in online courses ranging from 50 to 70% (Carr, 2000; Roblyer, 2006; Rovai & Wighting, 2005; Simpson, 2004). As a result, districts have begun implementing wraparound services to support students. Such approaches include assigning school staff members to serve as instructional coaches, academic interventionists, and mentors in an effort to

reduce the alarming attrition rates while improving the sense of community and feelings of connectedness for K-12 online learners.

Schools that have implemented online and blended learning models have discovered that students are more successful when they establish a sense of community and put student support structures in place. McMillan and Chavis (1986) defined a sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (p. 9). As a result, many districts have introduced on-site mentoring and facilitator models to support their online learners. Districts report that on-site mentors are vital partners in ensuring the academic success of K-12 virtual learners and can be the determining factor in whether students pass or fail their online courses (Borup, 2018). Existing research revealed that dedicated and skilled mentors can reduce the concerning attrition rates in online courses (Borup & Stimson, 2017; Ferdig, 2010; Freidhoff, 2016, 2018). There are inconsistencies in what mentoring looks like from program to program, however, and it is unclear the level of training on-site mentors and interventionists receive prior to working with online students (Freidhoff et al., 2015).

The demand for online learning opportunities increased further when, in March 2020, traditional schooling was halted, schools were shuttered, and teachers and students were forced to pivot to online learning overnight. The outbreak of the Covid-19 pandemic challenged education systems and even those districts reluctant to switch to online learning, had no choice but to shift to online teaching and learning. Districts did the best

they could to continue to educate students; however, they quickly found that students were unprepared for balancing their studies alongside their work, family, and social lives. It was especially challenging for students who were thrown into an online learning environment when they had no prior experience learning in an online capacity.

In Michigan, where on-site mentors are required and assigned to online learners, the state has provided important leadership and guidelines to promote student success during emergency remote learning. They utilized paraprofessionals, counselors, librarians, interventionists, and support staff members to provide a personal connection for students learning virtually. Despite these efforts, however, districts quickly discovered that students were ill-prepared for the demands of e-learning. Students who were fortunate enough to have a computer and a reliable internet connection did better than those who did not. Still others had difficulty navigating the learning management systems needed to complete coursework even with reliable internet access.

Michigan Virtual teamed up with Sundberg-Ferar (2020) to learn from this unique moment in educational history. They conducted a qualitative study to capture stories and experience from stakeholders, teachers, and students. Their goal was to create actionable plans for the future of education to make it more impactful for students regardless if districts were face-to-face, virtual, or blended (Michigan Virtual, 2021). They researched the remote learning impact on students' social and emotional well-being, as well as the effect on pedagogy, technology, and equity. Their research revealed the need for additional support structures such as on-site facilitators, as well as methods to improve student engagement, ideas for maximizing community resources to develop career and

life skills, enhancing virtual learning spaces, and clearly defining the role of teachers and support staff members to support students during emergency remote learning.

Auxiliary support services are *wraparound* services provided to students. These services include academic support such as tutoring, mentoring, counseling, and other non-instructional services that help students successfully complete their coursework. Those who provide auxiliary support are not simply limited to mentors. Other support roles are filled by online teachers, academic interventionists, two-way contact facilitators, counselors, and parents.

In terms of defining roles, the existing research has primarily identified and described facilitator roles as fostering relationships, monitoring, and instructing online students and research indicates a positive effect on academic success when mentors receive professional development and training. However, research examining the actual impact of auxiliary support systems on learning outcomes is limited and additional research is needed (Borup, Graham, & Drysdale, 2014). Using K-12 online research, my dissertation examined auxiliary support services in public schools in Michigan where districts are required to assign an on-site mentor to each student enrolled in an online course. My research topic explored online learning and the roles of on-site mentors, academic interventionists, and online teachers as they collaborate and provide wrap-around services to online students.

This case study sought to answer the research questions:

- Are online students more successful when they have individually assigned support staff members with whom to work?

- How might we improve how we prepare our mentors (e.g. training, support, and professional development) to better serve students?

Operationalizing Terms

With the expansive growth of virtual learning in K-12 schools, it is important to have a shared language that allows people to talk about the phenomena (Staker & Horn, 2012). Web-based learning continues to dominate the K-12 learning sector and it is important to have a common vernacular. Words like *online*, *web-based*, *virtual*, and *cyber*; *mentor*, *facilitator*, *coach*; and *blended*, *mixed-mode* and *hybrid*, are used synonymously in scholarly writing (Drysdale et al., 2014).

For the purpose of this paper, *online learning* will be used to refer to teacher-led education that takes place over the Internet, with the online teacher and student separated geographically, using a web-based educational delivery system that includes software to provide a structured learning environment (Watson et al., 2013). It is also important to note that definitions and terms continue to morph as the field continues to expand. The term *online learning* is used interchangeably with *virtual learning*, *cyberlearning*, and *e-learning* (Staker & Horn, 2012). In the report *The Rise of K-12 Blended Learning*, author Staker (2011) defined blended learning as, “any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace” (p. 2). To be more specific, in a blended environment, the teacher of record and the mentor teacher are located in the same school building as the student, whereas in a full-time online learning environment, the teacher of record is most often not in the physical school

but in a remote location. In this review, the term *blended learning*, will refer to a pedagogical approach that includes a combination of face-to-face instruction with computer mediated instruction (Kennedy & Ferdig, 2018). The terms *blended learning*, *hybrid learning*, and *mixed-mode learning* are often used interchangeably in current research. In the United States the term blended learning is used most often, however, (Martyn, 2003).

Online schools will refer to schools that offer K-12 classes through web-based methods via the Internet (Clark, 2001). Online schools offer various options for students. Students may elect to take all of their classes online where they are allowed to complete their coursework from home or a remote location. Other students may choose to participate in both online courses and face-to-face classes at their brick and mortar schools.

Mentors/coaches/facilitators will refer to the school or district employees who oversee and motivate their students who take online courses. They also serve as a liaison between the school and the online instructor (Gemin & Pape, 2017).

Community of Inquiry (CoI) is the theoretical framework upon which this study is based. The framework represents a process of creating a deep and meaningful collaborative-constructive learning experience through the development of three interdependent elements – social, cognitive, and teaching/mentor presence.

The teacher of record refers to a teacher who holds a valid Michigan teaching certificate or who is an instructor employed by or contracted through a community college or university for courses provided by a community college or university; who,

where applicable, is endorsed in the subject area and grade of the course; and is responsible for providing instruction, determining instructional methods for each pupil, diagnosing learning needs, assessing pupil learning, prescribing intervention strategies, reporting outcomes, and evaluating the effects of instruction and support strategies. As Section 1231 of the Revised School Code (MCL 380.1231) applies, the teacher of record shall be employed by the district.

The terms *facilitator*, *coach*, and *mentor* will be used interchangeably and will refer to the school employees who oversee and motivate students who take online courses. They also serve as the liaison between the school and the online instructor (Gemin & Pape, 2017). They must be an employee of the district and they monitor the student's progress, ensure the student has access to needed technology, is available for assistance, and ensures access to the teacher of record.

Participation is measured for self-scheduled courses through the use of two-way interaction. For membership purposes, a pupil must complete at least one (1) two-way interaction per week for each week of the four (4) week count period.

Section 21f of the State School Aid Act (MCL 388.1621f), allow pupils in Grades 6 to 12 to enroll in online courses where each course is capable of generating credit or a grade while being provided in an interactive internet-connected learning environment where pupils are separated from their teachers by time or location, or both.

Section 21f defines a *virtual course* as “A course of study that is capable of generating a credit or a grade and that is provided in an interactive learning environment where the majority of the curriculum is delivered using the internet and in which pupils

may be separated from their instructor or teacher of record by time or location, or both.” Michigan Virtual Research Learning Institute, 2022).

For the purpose of this paper, *online learning* will be used to refer to teacher-led education that takes place over the Internet, with the online teacher and student separated geographically, using a web-based educational delivery system that includes software to provide a structured learning environment (Watson et al., 2013). It is also important to note that definitions and terms continue to morph as the field continues to expand. *Online schools* will refer to schools that offer K-12 classes through web-based methods via the Internet (Clark, 2001). Online schools offer various options for students. Students may elect to take all of their classes online where they are allowed to complete their coursework from home or a remote location. Other students may choose to participate in both online courses and face-to-face classes at their brick and mortar schools.

Two-way interaction is the communication that occurs between the teacher of record or mentor and pupil, where one party initiates communication and a response from the other party follows that communication. This interaction may occur through email, telephone, instant messaging, or face-to-face conversation. All two-way interaction must be documented and available to the pupil accounting auditor upon request. Interaction must be relevant to the course or pupil’s progress.

Background to the Issue

With the expansive growth of virtual learning in K-12 schools, it is important to have a shared language that allows people to talk about the new phenomena (Staker & Horn, 2012). Words like *online, web-based, virtual, and cyber; mentor, facilitator,*

coach, interventionist; and blended, mixed-mode and hybrid, are used synonymously in scholarly writing (Drysdale et al., 2014).

For the purpose of this study, *online learning* will be used to refer to teacher-led education that takes place over the Internet, with the online teacher and student separated geographically, using a web-based educational delivery system that includes software to provide a structured learning environment (Watson et al., 2013). It is also important to note that definitions and terms continue to morph as the field continues to expand. The term *online learning* is used interchangeably with *virtual learning, cyber learning, and e-learning* (Staker & Horn, 2012). In the report *The Rise of K-12 Blended Learning*, author Staker (2011) defined blended learning as, “any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace” (p. 2). To be more specific, in a blended environment, the teacher of record and the mentor teacher are located in the same school building as the student, whereas in a full-time online learning environment, the teacher of record is most often not in the physical school but in a remote location. In this study, the term *blended learning*, will refer to a pedagogical approach that includes a combination of face-to-face instruction with computer mediated instruction (Kennedy & Ferdig, 2018). The terms *blended learning, hybrid learning, and mixed-mode learning* are often used interchangeably in current research. In the United States the term blended learning is used most often, however, (Martyn, 2003).

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Mentors and facilitators will refer to the school or district employees who oversee and motivate their students who take online courses. They also serve as a liaison between the school and the online instructor (Gemin & Pape, 2017).

Despite the increasing number of virtual enrollments, districts are troubled by the high attrition rates in online courses (Borup, Chambers, & Stimson, 2019). Emerging research identified several factors that are negatively impacting student success in online courses. Students report feeling isolated and disconnected from their peers, limited or no on-site student support systems, and a lack of motivation among online students (Freidhoff et al., 2015). Other studies have shown dropout rates in online courses ranging from 50 to 70% (Roblyer, 2006). It is no surprise that students who were struggling in traditional classrooms continue to struggle online. And forcing them to transition to online classes amidst the pandemic has only increased the struggle for virtual learners. Other practitioners are more positive about virtual learning, believing there are many benefits to the opportunities online learning affords such as individualized instruction, more curriculum opportunities, and flexible scheduling.

In Michigan, 21f legislation mandates that the primary district must assign a mentor to monitor the student's progress during the virtual course. The mentor must be an employee of the district and they are to monitor progress and ensure the student has access to needed technology, is available for assistance, and ensures access to the teacher of record (Michigan Virtual Research Institute, 2022). Three facilitator models have been used in the K-12 setting: on-site facilitators, online facilitators, and parents as facilitators. The on-site facilitator model is the most predominant. In this model, facilitators are located in the same physical location as students where they are able to provide support face-to-face. The facilitator's role can be filled by administrators, teachers, librarians, secretaries, counselors, or coaches. Students enrolled in full-time online programs complete their coursework remotely without ever having to report to school. Unlike on-site facilitators, they are not in the same physical location as students. They do not meet with students face-to-face. They communicate with students over the Internet and provide virtual support as they complete their coursework. Parent facilitator models are also used. In this model, parents provide hands-on support when teachers and students are separated by distance. It is difficult to monitor and assess the effectiveness of parents as facilitators because they provide support from home. Districts have no way to hold parents accountable for the level of support they provide their children. Additional research is needed for the effectiveness of the parent facilitator model. It is outside the scope of this research and, therefore, will not be explored.

Michigan Mentor Mandates

Michigan has been a front runner in the online learning. It was the first state that required students to have an online learning experience in order to graduate from high school (Barbour & Harrison, 2016). Section 21f of Michigan's School Aid Act also permitted students in grades six through twelve to take up to two online courses per academic term. The legislation includes a mandate that directs districts to use a portion of students' per pupil funding to cover the cost of enrollment (Archambault, Kennedy, & Freidhoff, 2016). Virtual course enrollments have skyrocketed as a result. According to *Michigan's K-12 Virtual Learning Effectiveness Report*, over 100,000 K-12 students were enrolled in virtual courses in the 2016-2017 school year and sixty-six percent of Michigan school districts reported having students enrolled in virtual courses. Of those enrolled, only sixty percent of the students completed their courses and twenty-five percent of online learners failed their classes altogether (Friedhoff, 2018). These numbers indicate a need for on-site support systems for students learning in a virtual environment.

Michigan legislation mandates that each online learner has an assigned mentor with whom to work. A mentor is a professional employee of the primary district who monitors the pupil's progress, ensures the pupil has access to needed technology, is available for assistance, and ensures access to the teacher of record. Section 21f only stipulates that the on-site facilitator "monitor the pupil's progress in the course" and be "available for assistance to the pupil." Teachers were charged with "determining appropriate instructional methods for each pupil, diagnosing learning needs, assessing pupil learning, prescribing intervention strategies, reporting outcomes, and evaluating the

effects of instruction and support strategies” (Michigan Department of Education, 2014). Following these directives, on-site facilitators and online teachers have great flexibility in how they fulfill their responsibilities. The legislation neglects to include mentor guidelines and accountability requirements, however, so mentoring programs vary from district to district.

With flourishing online enrollments, districts are faced with a radical restructuring of teaching and learning. Yet, there remains a scarcity of research focused on the effectiveness of K-12 online learning. Researchers have noted that the pertinent research conducted in online education is done at the post-secondary level and then generalized to the K-12 setting (Golisano & Miron, 2017). Likewise, much of the existing empirical research has been a comparison of student performance between the online and face-to-face environment that neglects to include research on effective methods. According to Borup, 2018, as cited in Kennedy and Ferdig, 2018, K-12 students lack the self-regulation, motivation, and metacognitive skills to succeed in autonomous virtual environments and need auxiliary support such as on-site and online mentoring to be successful.

Conceptual Framework

Online learning in K-12 schools started in the mid-1990s, however, research continues to be fairly limited. Therefore, there are only a handful of theoretical constructs that have been used as researchers begin to examine the role of mentors in virtual learning environments. These theories include Community of Inquiry (CoI) used by: Garrison, Anderson, and Archer (2000), Borup, Graham, and Drysdale (2014), and de

la Varre, Keane, and Irvin (2011); the Sense of Community framework used by: Drysdale (2013) and Drysdale, Graham, and Borup (2016); and Borup, West, Graham, and Davies' (2014) Adolescent Community of Engagement (ACE) framework. This chapter presents information about these theories that can improve the success of online learners while informing future researchers and practitioners. I noted overlaps among the existing empirical research because the concept of *community* has been used in many studies. McMillan and Chavis' (1986) Sense of Community theory's four elements of membership, influence, integration and fulfillment of needs, and a shared emotional connection will be investigated as they relate to the academic success of online learners.

Pragmatism and Community of Inquiry (CoI)

Pragmatism is said to have emerged from the struggles of the American frontier, where survival was a daily challenge. Within this context, Americans used the results of those experiences to solve the problems as they arose again. There were often very practical consequences to decisions (Samuelsen, 2008). These ideas of collecting information to inform future knowledge, became the foundations of pragmatic inquiry.

The CoI theoretical lineage can be traced back to the pragmatist philosophers, C. S. Peirce and John Dewey, who were interested in the process of scientific inquiry and knowledge formation. Dewey was a proponent of the concept of "community" in schools (Dressman, 2009). And, although online learning did not exist during Dewey's lifetime, his social learning theory is still applicable today. For instance, students report that learning in a virtual environment can be very isolating. CoI encourages collaboration

where individuals work together to create deep and meaningful learning experiences through social, cognitive, and teaching/mentor presence.

CoI emphasizes that knowledge is entrenched within a social context, thereby requiring agreement among those involved in the process of inquiry for legitimacy. Peirce originally intended CoI to be used in the natural sciences, but it has been tweaked and adapted to different fields over the years (Pardales & Girod, 2006). For instance, Dewey was the first to apply the CoI theory to the educational setting where teachers and students participate in authentic inquiry. Later, Lipman further developed CoI arguing that the classroom setting is a type of community that leads to “questioning, reasoning, connecting, deliberating, challenging, and developing problem-solving techniques” (Lipman, 2003, p. 84).

Garrison et al. (2000) were the first to adapt the elements of CoI to the online learning environment. In their work, they viewed teachers as the critical component of online learning communities where students were at a serious disadvantage without teacher leadership. Likewise, de la Varre et al. (2011) and Borup et al. (2014) conducted research using the CoI framework in conjunction with K-12 online learners, teacher presence, and the role of on-site mentors. Figure 1.1 is a visual representation of the CoI framework to a mentor and mentee network. Their research provided one theoretical lens through which I see my work. Garrison et al. (2000) adopted Moore’s (2007) *social presence* and explained that social presence impacts students’ *cognitive presence* because it allows for meaningful and sustained communication that students need to construct knowledge of course material. His team went on to say that neither social nor cognitive

presence would be inadequate without *teaching presence*. They viewed teaching/mentor presence as the binding element of the CoI framework because it is established through instructional design and organization, facilitating online discussions, and direct instruction (Anderson, Rourke, Garrison, and Archer, 2001).

Figure 1.1

Conceptual Scheme adapted from the Community of Inquiry (CoI) Framework



Figure 1.1 Adapted from The first decade of the community of inquiry framework: A retrospective, *Internet and Higher Education*. 13(2010) 5 - 9., (2009) Garrison, Anderson, and Archer. Elsevier Inc. with permission from Elsevier.

The Community of Inquiry (CoI) framework represents a process of creating a meaningful learning experience through the development of three interdependent elements: social, cognitive, and teaching presence. The CoI framework has been grounded in research and proven over the last three decades to be effective (Palmer, 2020). When applying the CoI framework to online courses, research has shown that the intersection of the three presences has a positive influence on students' experiences in their online courses. These elements overlap and can be applied to the wrap-around services and the mentor-mentee relationship among online learners (Figure 1.1). Research

specifically states that within online environments, student success is dependent on the interaction between learners and the development of community (Garrison et al., 2000).

Adolescent Community of Engagement (ACE) Framework

When compared to adult learners, adolescents require higher levels of support. The additional support can come from the online teacher, but it is often inadequate support. Therefore, Borup, West, Graham, and Davies (2014) developed the Adolescent Community of Engagement (ACE) framework to increase adolescent online engagement. Their primary hypothesis noted a positive correlation between student engagement and teacher, parent, and peer engagements. Their research focused on teacher engagement which includes instructing, organizing and designing, and facilitating interaction. The ACE framework aligns well with my research because it was first applied to Borup et al. (2014) case study research where they conducted a study at a successful cyber high school. They found that teacher engagement was a critical component to online learner success but they cautioned that teacher support is limited. From their findings they recommended districts assign each student an on-site facilitator to provide in-person support.

In another study, Borup, Walters, and Call-Cummings (2019) used the ACE framework and narrative analysis to examine the complexities of parental engagement in one cyber school. They found that parental involvement in their children's online learning is complex but necessary for student success. They also suggested that parents need to account for their children's learning preferences and their relationships with them when deciding if online schooling is the right fit for their child.

Likewise, Roblyer et al. (2007) evaluated an online program that used online teachers and on-site facilitators to support students at over 100 K-12 schools. They used student achievement data, teacher and student surveys, and interviews with facilitators, teachers, and students. They learned that on-site facilitators played a critical role in student success, but that facilitator needed better training in order to be effective.

Sense of Community Theory

The other theoretical lens that is a possibility for my research is the Sense of Community theory. This theory can be traced back to Sarason's (1974) seminal work on the psychological sense of community where he described community as one's similarity to others and an interdependence where one gives and does for others what one expects from them, thereby portraying the feeling that one is a larger dependable and stable structure. Within a decade, this theory infiltrated other academic disciplines and would become a key tenet of the "communities for all" initiatives in the United States.

McMillan and Chavis (1986) are credited with building upon Sarason's (1974) work to create four elements of sense of community theory: (1) membership in a community; (2) influence in a community; (3) integration and fulfillment of needs; and (4) a shared emotional connection. Their sense of community theoretical foundation of a sense of community grew to encompass all types of communities such as schools, religious communities, workplace communities, as well as communities of interest (McMillan & Chavis, 1986, pp. 9-15).

The sense of community framework has since been used by researchers examining learners in the K-12 online environment. Drysdale (2013) examined the K-12

online learning environment and how on-site mentors can improve the sense of community within them. He conducted a case study illustrating how online mentors can provide the same level of support for their students that on-site mentors provide. In a follow-up study, Drysdale et al. (2016) built upon Drysdale's (2013) original work by including student interviews so they could gather both teacher and student perspectives of the mentoring programs.

After exploring the theories, Community of Inquiry, the ACE framework, and Sense of Community in more detail, I was able to narrow it down to one potential theoretical framework. I plan to frame my research using Community of Inquiry (CoI) theory. I noted overlaps among the existing empirical research because the concept of "community" and "educational presences" have been used in many studies.

Problem Statement

Schools that have implemented online and blended learning models have discovered that students are more successful when they establish a sense of community and put student support structures in place. McMillan and Chavis (1986) defined a sense of community as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (p. 9). As a result, many districts have introduced on-site mentoring models to support their online learners.

Districts report that on-site mentors are vital partners in ensuring the academic success of K-12 virtual learners and can be the determining factor in whether students pass or fail their online courses (Borup, 2018). Existing research revealed that dedicated

and skilled mentors can reduce the concerning attrition rates in online courses (Borup & Stimson, 2017; Ferdig, 2010; Freidhoff, 2016, 2018). However, there are inconsistencies in what mentoring looks like from program to program. It is also unclear the level of training on-site mentors receive prior to working with online students (Freidhoff et al., 2015).

The existing research has primarily identified and described mentor roles as fostering relationships, monitoring, and instructing online students and research indicates a positive effect on academic success when mentors receive professional development and training. However, research examining the actual impact of mentors on learning outcomes is limited and additional research is needed (Borup & Drysdale, 2014).

Research Questions

The purpose of the study is to analyze the impact of on-site mentors in improving learner outcomes in online schools. I sought to answer a primary research question: How can we make K-12 mentoring effective for all online learners? The results are a critical first step in informing practitioners and adding to the body of literature that might establish new models and training that are aimed at improving learning outcomes.

This case study sought to answer the research questions:

- Are online students more successful when they have individually assigned support staff members with whom to work?
- How might we improve how we prepare our mentors (e.g. training, support, and professional development) to better serve students?

To answer the research questions, I examined on-site mentors and online teachers in a K-12 public school district in Michigan over the course of one semester.

Significance

Online and blended learning initiatives are gaining traction in an effort to support the increase of enrolled students in virtual learning contexts. Therefore, additional empirical studies are needed to inform best practices. As K-12 online enrollments increase, it is imperative that researchers, course providers, school administrators, online teachers, academic interventionists, and on-site mentors work to improve the auxiliary support provided to students. Although these efforts can be difficult, it is critical to the success of all online students (Borup et al., 2018). Additional research is needed to specifically define and empirically validate the methods and techniques required for on-site mentors to be successful so that programs can be effectively developed and implemented in the K-12 online learning arena.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Overview

The traditional K-12 classroom was invented over 200 years ago and it is still the most popular model for educating students in the United States today. Traditional classrooms are learning spaces in which the teacher provides face-to-face instruction to students. Students most often sit in rows of individual desks and learning largely centers around the teacher. The ideology of the traditional classroom model is being challenged because authentic learning takes place when it is student-centered and not simply funneled through the classroom teacher. Students ought to drive their own learning, their own engagement, and the roles of teacher and student should be reciprocal (Rice, Deschaine, & Mellard, 2018). Another criticism is that the traditional classroom is no longer suitable for the fast-paced learning styles of students today.

When learning is centered around the teacher; learning is passive, and innovation and creativity is often stifled by teachers who provide whole group rather than individualized instruction. As Jonassen, Howland, Moore, and Marra (2003) said, “Meaningful learning is best facilitated through knowledge construction, not reproduction; conversation, not reception; articulation, not repetition; collaboration, not competition; and reflection, not prescription” (p. 15). This education model persists today despite a changing educational landscape that has not kept pace with the diverse learning styles of students. Faced with global competition, underwhelming test scores, and a

widening achievement gap, policy makers have begun to seek alternative methods to educate students. Two such methods are online and blended learning.

Online learning was born out of distance education. In the 1930s, universities began to offer distance learning and correspondence courses to students. At that time, teachers and students corresponded by mail. By 1985, distance education evolved from paper and pencil methods to “tele learning courses” where students submitted assignments by email. The inception of the Internet, which paved the way for virtual and blended learning models as they are known today. Online learning is where instruction and content is delivered primarily over the Internet. Blended learning is a modality in which students learn part-time in a brick and mortar setting and part-time online. Blended models include small group instruction, individual instruction, group projects, paper and pencil assignments, and online activities (Schwirzke, Vashaw, & Watson, 2018). Schools are able to leverage technology to deliver instruction and content over the Internet.

Online and blended modes of instruction are increasingly popular because they offer students access to courses otherwise unavailable to them, while offering flexible anywhere, anytime access to education. There are credit recovery options, Advanced Placement (AP) offerings, and options for students with individual needs that are often inaccessible in traditional classrooms. Unlike in traditional classrooms where teachers deliver instruction to whole groups of students, in virtual environments, teachers utilize technology to enhance, individualize, and personalize instruction thereby giving students more choice and flexibility than they have in traditional classrooms (DiPietro, 2010). This shift to online learning environments has offered several challenges to the traditional

classroom structure. These challenges include students feeling isolated and disconnected from their peers, low levels of student support systems, and a lack of motivation for students to complete coursework. School districts are also concerned with the high retention and dropout rates which are as high as 50 - 70% (Roblyer, 2006).

As described in chapter one, my research topic explores online learning and the role of mentors, a relatively new phenomenon in the field of education. Therefore, the theoretical considerations are not as discernable. Most of the existing research that examines the critical components of successful online schools has focused on higher education. It was not until recently that research has grown to encompass online learning in K-12 schools and the role mentor teachers play. Most of the existing research has been exploratory in nature using case study methodology. Additional exploratory case studies are certainly needed but researchers must also begin to use a variety of methodologies in order to make generalizations and explain relationships between variables in a variety of settings. For instance, grounding studies in theoretical frameworks will provide a foundation for a more coordinated research effort (Kennedy & Ferdig, 2018, p. 434).

The existing empirical research has primarily identified and described mentor roles as fostering relationships, monitoring, and instructing online students, and research indicates a positive effect on academic success when mentors receive professional development and training. However, research examining the actual impact of mentors on learning outcomes is limited and additional research is needed (Borup & Drysdale, 2014).

Additional research is needed to better understand how on-site facilitator models in online learning environments may operate to improve student success. Research has

shown that student success improves when facilitators build a rapport with students while encouraging discourse and active participation (Borup et al., 2019). It is difficult to measure facilitators' effectiveness and, therefore, additional studies are needed. A practical place to begin is to examine learning theories and how they can positively impact online learning as the field continues to evolve.

Conducting the Literature Review

The scope of online learning is vast, yet the empirical research conducted in the area of on-site mentoring models for online learning is scant. Therefore, it was necessary to begin my research by gleaning a historical perspective of K-12 online learning. I began by searching Google Scholar® using terms such as: *K-12 online learning*, *virtual schools*, *cyber schools*, *hybrid/blended learning*, *on-site mentors*, *e-learning*, *synchronous*, and *asynchronous learning*. I then used the ERIC database using the terms “online learning” and limited my search to full-text, peer-reviewed articles from 2010 - 2018. The search was too broad, yielding close to 5000 results. I then searched “K-12 online learning” and “online mentors” with the same limiters and yielded 15 results.

I skimmed the abstracts of the articles and looked for key components and headings such as: *literature review*, *methodology*, *results*, *discussion*, and *implications* that would indicate the articles were empirical. I found the articles in the *Journal of Online Learning Research* and publications from the International Association for K-12 Online Learning (iNACOL) to be the most relevant. Kennedy and Ferdig's (2018) *Handbook of Research on K-12 Online and Blended Learning* was also cited numerous

times in the reading. The book is a collection of landmark studies and proved invaluable to this research.

Additionally, I read studies pertinent to K-12 online learning in Michigan conducted by researchers from Michigan Virtual Learning Research Institute® (MVRLI®), a center for online learning research and innovation. I learned that MVRLI® was established in 2012 by Michigan's Legislature. The scope of their research was to: expand the K-12 online and blended learning knowledge base; inform local, state, and national public education policy strategies that reinforce and support online and blended learning opportunities for the K-12 community; experiment with new technologies and online learning models to foster expanded learning opportunities for K-12 students; and develop human and web-based applications and infrastructures for sharing information and implementing K-12 online and blended learning best practices (Friedhoff, 2018).

The focus of the literature review is on online learning in K-12 public schools with an emphasis on Michigan schools where on-site mentors are required. It will include the role, responsibilities, and strategies of mentors to support online learners; the challenges K-12 experience in online environments and the need for effective on-site mentors; and existing professional development and training models for on-site mentors. Not included in the literature review is the role that parents play in the realm of online learning. With the exception of Curtis and Werth's (2015) qualitative study that provided a glimpse into parents' perceptions and involvement in K-12 virtual schools, and Hasler-Waters, Borup, and Menchaca's (2018) study that illustrated the parent-facilitator model, the existing research is vague.

Review of Research on the Impact of Academic Mentoring

The preliminary review of empirical research suggested that online learning and on-site mentoring is still in its infancy and there is a lack of accountability and oversight in the field. Additionally, although Michigan requires that all online learners be assigned an on-site mentor, little is known about the level of training mentors receive prior to becoming mentors. The research is lacking in the area of how successful mentors fulfill their responsibilities to students as well.

The concept of mentoring dates back almost 3000 years to Homer's epic poem, *The Odyssey*, where Odysseus asked Mentor to guide and teach his son, Telemachus, while he fought in the Trojan War. Mentor essentially used his patience and wisdom to educate, coach, and shape Telemachus as he matured into a man. Mentor was also responsible for molding his character and instilling values (Ramani, Gruppen, & Kachur, 2006). Through the years, the term mentor has been adopted and used in the field of medicine, business, education, and other disciplines to mean someone who imparts wisdom to and shares knowledge with a less-experienced individual.

Researchers have written that effective mentors must possess empathy, maturity, self-confidence, resourcefulness, and a willingness to commit time and energy to another person (Barondess, 1997). The mentor must also be able to offer guidance, to motivate and challenge, to encourage self-realization, and to foster growth. According to Wood and Mayo-Wilson (2012), mentoring aims to improve social competence, strengthen attachment, and increase social skills among students. It can also be an inexpensive academic intervention that can have a powerful impact on student success when delivered

frequently. The overall goal in an academic mentoring relationship is to help students function effectively and be successful in their personal and professional lives.

Researchers have found that mentor-mentee relationships are most successful when mentors are trained, organized, committed to their students, while also being strong communicators (Straus, Johnson, Marquez, & Freidman, 2014). It is also important that the mentor models and programs being used are organized and well-planned. Mentoring does not work when mentors are not trained, when they offer too much or not enough structure, or when the personalities of the mentor and mentee are mismatched (Straus et al., 2014).

Research also indicates a positive effect on academic success when mentors participate in professional development and training. There are inconsistencies in existing mentoring models, and it is unclear the level of training (if any) these mentors receive prior to working with virtual learners (Freidhoff et al., 2015). Research examining mentors' impact on learning outcomes is limited and additional research is needed (Borup & Drysdale, 2014).

Although research is limited, existing research indicates positive outcomes when students are paired with a mentor. Mentors establish a rapport with students to engage on a personal level while helping them develop study, organizational, and self-regulation skills (Hannum, Irvin, Lei, & Farmer, 2008). Mentoring has traditionally been utilized in face-to-face environments with the mentor and mentee collaborating in-person.

Technological advancements now afford mentors and mentees opportunities to communicate and connect in both virtual and in-person settings. There are distinct

advantages when mentoring is accomplished in-person. The relationship between the mentor and mentee is able to grow organically, leading to a trusting relationship between the two parties. It is also easier to engage when the mentor and mentee are able to meet face-to-face. And, while extant research exists on the subject of academic mentoring in traditional face-to-face environments, little is known about mentoring in unorthodox settings such as in online environments. Recent research has revealed that dedicated and trained mentors can reduce attrition rates in online courses (Borup & Stimson, 2017; Ferdig, 2010; Freidhoff, 2018). Online facilitators provide the same services to students, but they are located off-site and not in the same physical location as their students.

Students learning in asynchronous environments tend to require higher levels of support than their face-to-face counterparts and districts are learning that students are more successful when student support structures are in place. The most common approach is to utilize the online instructor to lend support. However, online instructors often lack the time to juggle their online teaching duties while meeting the demands of online students.

As a result, districts have begun to implement facilitator (mentor) models, stating that facilitators are vital partners in ensuring the academic success of K-12 virtual learners and can be the determining factor in whether students pass or fail their online courses (Borup, 2018).

Much of the research on academic mentoring has been conducted in higher education where researchers have noted shortcomings such as a lack of theoretical guidance, no operational definition of mentoring, and poorly designed programs (Law,

Hales, & Busenbark, 2020). As a result, mentoring programs vary in structure with regard to the faculty assigned, the level of training, theoretical framework, the targeted population, and the research design used (Law et al., 2020).

Schunk and Mullen (2013) wrote a research article on mentoring in self-regulated learning environments. They evaluated the Mentoring Research Model and found strong links among mentoring and positive outcomes for students. Law et al. (2020) published a manuscript to identify past and current issues with mentoring models. They reviewed three existing comprehensive literature reviews from higher education to glean an understanding of issues facing mentoring models and programs, the lack of theoretical frameworks guiding mentoring research, and research limitations. While their research pertained to university mentoring programs, their findings can be applied to K-12 education. For instance, in an effort to reduce failure rates and improve student success, institutions have begun to implement mentoring models and best practices that are pertinent to higher education and the K-12 sector. Law et al. (2020) made four recommendations for future research to strengthen mentoring programs that can be applied to the K-12 sector: mentoring models need strong theoretical guidance to inform the research; a functional definition of mentoring; rigorous research designs that include more than one geographic location, adequate sample size, and broadly focused objectives. By implementing these recommendations and addressing the design issues, the validity of mentoring programs and students' academic success will improve.

The Role, Responsibilities, and Strategies of On-site Mentors

On-site mentors are meant to be experts in the learning process, not in the course content (Hannum et al., 2008). Most often they are teachers, counselors, librarians, or paraprofessionals who serve as the liaison between the online instructor and the students (Borup & Drysdale, 2014). They are tasked with establishing relationships, promoting learning interactions, monitoring student performance and behavior, motivating students to fully engage in learning activities, and providing direct instruction when able (Borup & Drysdale, 2014; Harms, Niederhauser, Davis, Roblyer, & Gilberts, 2006).

There is a need for existing models of successful on-site mentoring programs. Freidhoff et al. (2015) published a descriptive study that described the characteristics and actions of successful on-site mentor programs in three of Michigan's virtual schools where assigned mentors are mandatory. Their work was built upon Hannum et al. (2008) cluster-randomized control trial where researchers found a positive correlation between students passing their online courses when they were assigned a trained mentor. Freidhoff et al. (2015) disaggregated data from a 2015 online student pass rate study to identify highly effective virtual schools in Michigan. Their goals were to investigate the characteristics and commonalities of successful mentorship in order to provide useful insight to school leaders and practitioners responsible for implementing mentoring programs. The team developed a set of thirty interview questions in order to understand the mentor's roles and responsibilities, to understand how mentors prepare students for online courses, to identify mentoring strategies, and to establish best practices that would later be shared in a guide for mentors and those creating mentor positions and programs

(Freidhoff et al., 2015). The study's participants were selected because they were deemed highly successful mentors in their respective Michigan virtual schools. The team discovered that mentor teachers were the most successful when they helped with the following: orienting students to their online courses and establishing learning expectations, supplying students with the required technology and materials, troubleshooting technological issues, and building relationships with students.

As the year progressed, mentor teachers also monitored students' progress and levels of engagement, developed strategies to motivate students to more fully engage in learning activities, facilitated instructional support and collaboration, proctored final exams, and recorded students' final grades. Successful on-site mentors attributed their success to having a dedicated time and space to mentor students, fostering relationships with students early in the semester, and having administrators with a vision for the school's online learning program who understood the importance of mentors in achieving that vision. Their findings were consistent with Roblyer et al. (2008) study that reported students who attended classes with on-site mentors were twice as likely to pass their online courses compared to those who had flexibility in the time and space where they worked.

Researchers then interviewed twelve online teachers to glean a more general perspective on mentoring in three of Michigan's virtual schools. The online teachers unanimously agreed that mentors play a vital role in students' academic success. They also voiced concerns that many mentors were assigned mentoring responsibilities with

little to no training on the skills and knowledge needed to positively impact students' learning. As a result, the quality of mentoring varied greatly.

From the research findings, the team made two recommendations to districts looking to improve students' academic success in online environments. First, they urged administrators to put policies in place that ensure mentors receive adequate professional development and training prior to becoming mentors. Second, they recommended that students have access to structured and consistent mentoring. Freidhoff et al. (2015) articulated that additional research is a critical first step in efforts to solve real K-12 virtual school problems by beginning to build a foundation of literature that can establish new theories and models aimed at improving learner outcomes.

In general, the research on the roles, responsibilities, and strategies of on-site mentors revealed the need for mentoring models, mentor training programs, and structured learning environments to improve learner outcomes for online students. Friedhoff et al. (2015) study found that while some students benefited from online learning, many were not being well served by existing models. Additionally, mentors reported being assigned mentoring roles with little or no training on how to be effective in their roles. As a result, administrators have struggled with how to utilize mentors to support online learners when they lack the funding for establishing program policies and mentor training programs. Friedhoff et al. (2015) made the recommendation for future researchers to revisit practices in all aspects of the online learning experience, including offline components like mentoring programs to improve learner outcomes.

Pedagogy of Teaching and Mentoring in K-12 Virtual Environments

There is a need for research on pedagogy of teaching in K-12 virtual environments that includes the role mentors play in students' academic success. DiPietro (2010) analyzed existing research by Barbour and Reeves (2009) and Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer (2004) pertaining to face-to-face and post-secondary online literature to understand the practices of K-12 online teachers. The study served as a follow-up to address the gap in research of successful virtual school teaching. The research explored "the perceptions held by virtual teachers for their instructional roles to gain insight into the instructional strategies supporting a teacher's coordination of pedagogy, technology, and content" (DiPietro, 2010, p. 329). She used a constructivist framework to inform the design of data collection and analysis procedures to investigate the perspectives of sixteen virtual teachers in the Midwest. Research participants were interviewed formally and asked to review and consider the questions in relation to the courses they were teaching at the time as well as other online courses they had taught in the past. Interviewees were asked follow-up questions via email thereafter with questions regarding general instructional strategies, technology use, and general beliefs about teaching in an online environment. Researchers then analyzed interview transcripts, email correspondence, notes, and memos using the coding strategy associated with constructivist grounded theory. Several themes emerged to inform practice, policy, and the need for future research.

One important implication was that of the mentor's role in successful virtual school teaching. DiPietro (2010) acknowledged the need for a unified understanding of

the role of the mentor in virtual schools. Virtual teachers identified mentors as the key component to assist students in their online endeavors. They reported that mentors foster personal relationships with students in order to glean important information about students' backgrounds that would otherwise be unknown. Mentors also encourage and motivate students as they navigate their online coursework. The author cautioned against selecting mentors who do not have a background in education and urged policymakers "to develop a clearly defined role of the mentor to eliminate ambiguity about their purpose within the virtual school structure to ensure all students benefit from the same quality support described by the participants" in this study (DiPietro, 2010, p. 350).

Although the impact of on-site mentors is limited, the studies indicate that mentors can improve course outcomes and student achievement when mentor-models are implemented with fidelity. It is encouraged that researchers and policy makers continue to collaborate to identify effective on-site mentor practice and preparation strategies (Borup, 2018), as well as to better understand how course content, pedagogy, and technology can co-exist to improve the delivery of virtual courses.

Table 2.1 shows the ways that I have worked on applying the CoI framework to the context of auxiliary support systems for this dissertation work.

Table 2.1

Application of CoI Framework to the Auxiliary Support Systems

Framework on Challenges for On-Site Mentors
<p>Mentor Responsibilities</p> <p><i>Individual Challenges for Students</i></p> <ul style="list-style-type: none">• Conflicting priorities• Lack of Motivation• Academic confidence• Technological confidence• Social support (support from home and employers)• Gender• Age <hr/>
<p><i>Individual Challenges for Mentors</i></p> <ul style="list-style-type: none">• Technological confidence• Motivation and commitment• Qualification and competence• Time• Course challenges Course design• Curriculum• Pedagogical model• Subject content• Teaching and Learning Activities• Localization• Flexibility
<p><i>Contextual challenges</i></p> <ul style="list-style-type: none">• Organizational• Knowledge management• Economy and funding• Training of teachers and staff
<p><i>Societal/Cultural</i></p> <ul style="list-style-type: none">• <i>Lack of training</i>• <i>Role of teacher and student</i>• <i>Attitudes on e-learning and IT</i>• <i>Rules and regulations</i>
<p><i>Technological challenges</i></p> <ul style="list-style-type: none">• Access• Cost• Software and interface design• Localization

All of the characteristics of the auxiliary support systems can be fit into the CoI framework.

Professional Development and Training Models

The need for trained mentors is essential. As mentioned previously, mentors provide the wraparound advocacy that is essential to the success of online learners. As schools across the country begin to integrate teacher-mentors, there is limited research on how mentors are trained and the impact mentors have on students' academic achievements (Borup & Drysdale, 2014). The existing research indicated that students who regularly met with mentors were more likely to successfully complete their courses. Mentors who are trained are also more likely to positively impact their students' learning than those who receive no professional development.

Despite the positive impacts noted in existing research, however, the impact of mentors can vary greatly. For instance, Roblyer (2006) interviewed five successful virtual schools to gather their secrets of success. He noted that "good virtual programs believe that effective online teachers, mentors, and facilitators are made, not born" (p. 34). Likewise, in Borup and Stimson's (2017) study on mentor responsibilities, the highly effective online teachers who were sampled and surveyed reported that the effectiveness of on-site mentors was largely dependent upon the level of training they received. Of the mentors surveyed, not one had received any training or professional development prior to being assigned as mentor teachers despite previous research that found that students with mentors who received professional development performed better than students with mentors who have not received professional development (Hannum et al., 2008). Their

study used a cluster-randomized control trial with thirty-six match pairs of schools and students in rural schools. The researchers found students had a higher pass rate when they were assigned a trained mentor compared to those who had a mentor with no training.

Based on these findings it is recommended that researchers seek to better understand best practices that can guide professional development efforts. Freidhoff et al. (2015), expanded on Borup and Drysdale's (2014) previous research to do just that. Through the *Michigan Virtual Learning Research Institute* (MVRLI), researchers completed a descriptive study where they examined mentoring roles in three Michigan school districts. They interviewed fourteen mentors and collected data to glean information on mentor preparation and certification, time allocation, and mentor training and professional development. Respondents stated they had little to no exposure to online learning and no mentor training or preparation prior to becoming a mentor. All of the mentors admitted to seeking training opportunities on their own time and that it was difficult to pursue professional development while working full-time.

While there is a wealth of research on academic mentoring, scant research exists on online mentoring programs. Stimson, Freidhoff, and Kennedy (2014) documented ten successful online mentoring programs in Michigan. They wanted to develop a collection of Michigan's best practices for on-site facilitators. They set out to summarize existing mentor program commonalities and differences while providing examples to other districts. They used a case study methodology where they interviewed ten mentors in a variety of staffing configurations to discover how mentor time was allocated, mentor preparation, mentor experience, program size, and student demographics. The research

team used a set of over thirty questions to gather information about each of the successful programs. Notably, none of the interviewees had specific preparation for being a mentor nor had they participated in any organized professional development prior to the interview. The interviews revealed that many of the school's leaders would support professional development if the mentor sought training, but districts would not pay for substitute teachers like they would for a classroom teacher's absence. This made it difficult for the mentor to be absent; especially since mentors must be present per the Michigan Pupil Account regulations, or the district is not compliant (Stimson et al., 2014).

Although each of the schools were selected for their successful mentoring programs, there was wide variability in how each school set up their mentoring models. For instance, variations were reported in the manner mentors were selected, the school's culture, the location where mentoring took place, and access to the mentor. The research team then compiled a list of commonalities and differences. Based on the results, they discovered that successful mentors had a lot in common.

The vast majority of on-site facilitators received no training or professional development on existing mentoring models or best practice. As a result, facilitators have been left to learn on the job through trial and error. In a descriptive case study, Stimson et al. (2014) concluded that one size does not fit all when it comes to successful mentoring programs. The case study revealed the need for the development of mentoring guidelines as well as protocol for professional development. One positive outcome from the authors' research was the development of the *Mentor Fundamentals: A Guide for*

Mentoring Online Learners. It includes practical research and experience-based best practices for schools who provide on-site support for online learners, the shared conceptions of the mentors interviewed, the roles and responsibilities of mentors, proven practices that lead to increased student success, and common concerns about pacing and communication issues. The guide also includes existing research highlighting mentoring and online learners.

In general, the research on professional development and training mentor models demonstrated positive course outcomes and course completion rates for students who had trained mentors (Hannum et al., 2008; Staker, 2011). Yet, administrators are reluctant to invest in professional development for on-site and online facilitators. School leaders see the merit in having high quality online programs, but they are reluctant to invest in mentoring programs when money to support online enrollments may not exist (Freidhoff et al., 2015). This dichotomy is one pitfall that negatively impacts staff and students working in virtual environments and is an area that merits further scrutiny.

Conclusion

This literature review explored the history and exponential growth of online learning enrollments with an emphasis on schools in Michigan where legislation mandates that students have an assigned mentor. The existing research provided a foundation for effective mentoring programs, commonalities, and a call for effective on-site mentoring programs including training for educators who oversee online learners. Online and blended learning initiatives are in their infancy and the field of virtual learning is advancing. As K-12 online enrollments increase, it is imperative that

researchers, course providers, school administrators, online teachers, and on-site mentors work to improve the mentoring support that is provided to students. Although these efforts can be difficult, it is critical to the success of all online students (Borup et al., 2018). Additional research is needed to specifically define and empirically validate the methods and techniques required for on-site mentors to be successful so that programs can be effectively developed and implemented in the K-12 online learning arena.

As mentioned previously, online and blended learning options have grown exponentially, but there is a lack of training, oversight and accountability, as well as a cause for concern with the high attrition rates in online courses. Researchers have found students are more successful when auxiliary support systems are in place. Therefore, my study explored the impact of on-site mentors in online learning environments in Michigan public schools where mentors are required. I investigated which mentor roles are most influential when students are deciding whether to drop out or to complete their online courses. Understanding these relationships can inform teacher preparation programs, online schools, and facilitators as to where they should focus their efforts to make online learning successful for all learners.

CHAPTER THREE

METHODS

Overview

My dissertation topic explored auxiliary support systems and mentor roles in a K-12 online learning environment. Mentors, also known as facilitators, coaches, and academic interventionists, are critical partners in ensuring students' academic success in navigating virtual learning. These support staff members provide daily support and wrap-around services for students enrolled in online courses. I was particularly interested in conducting research that would answer how educators can make K-12 coaching and mentoring effective for all online learners. I analyzed the impact of on-site mentors in improving learner outcomes in online schools. I also investigated which facilitator strategies were most influential. This case study sought to answer the research questions:

- Are online students more successful when they have individually assigned support staff members with whom to work?
- How might we improve how we prepare our mentors (e.g. training, support, and professional development) to better serve students?

Understanding these relationships can inform teacher preparation programs and online schools as to where they should focus their efforts to improve outcomes for virtual learners. Because digital learning initiatives are in their infancy and there are tectonic shifts in digital learning pedagogy, additional empirical studies are needed. Further research is needed to substantiate the methods and techniques required for mentors to be successful so that programs can be effectively developed and implemented.

Research Design

Case Study Approach

I used a constructivist/emergent approach to design an evaluative case study to analyze auxiliary support systems in one online school where the district is required to assign a support staff member to each student enrolled in online courses. The composition of the study was based on the format of Robert Yin's (2014) seminal work on case study as a methodology. In his book, *Case Study Research and Design* (2014), he defined a case as "a contemporary phenomenon within its real life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over the phenomenon and context" (p. 13). Yin also referenced Crotty's (1998) fundamental notions in case study research: objectivity, validity, and generalizability that address the *how* or *why* questions concerning the phenomenon of interest.

Yin (2002) recommended case study design as a useful research method for program evaluation. Evaluations are intended to assess and explain the results of "demonstrations" or action projects operated in any variety of authentic field settings (Yin, 1992). He recommended the researcher "maximize four conditions related to design quality: construct validity, internal validity, external validity, and reliability" (Yin, 2002, p. 19). He refers to the four conditions as "yardsticks" and urges researchers to keep them in mind at every phase of the inquiry process to ensure the quality of the investigation (Yin, 2002, p.19). He contends that researchers should be able to provide the logic behind

every move and decision in the research process as they align with the theoretical propositions and the characteristics of the case (Yin, 2002).

While conducting my review of literature, there was a case study that piqued my interest. The *Michigan Virtual Learning Research Institute* completed a descriptive case study where the research team examined mentoring roles in three Michigan school districts. They interviewed fourteen mentors and collected data to glean information on mentor preparation and certification, time allocation, and mentor training and professional development. Respondents stated they had little to no exposure to online learning and no mentor training or preparation prior to becoming a mentor. The mentors admitted to seeking training opportunities on their own time and noted how difficult it was to pursue professional development while working full-time (Borup, 2017).

I was also inspired by another study by Friedhoff et al. (2015), where they conducted a descriptive study of on-site mentors in public schools in Michigan that utilize mentors to support their online students. They interviewed mentors to learn about various programs and program practices, providing points of comparison for mentors, instructors, administrators, parents, and students in regard to alternative support structures and/or strategies for online learners. Their findings revealed the need for consistency among online programs as well as training and professional development for mentors and interventionists. I contacted the research team and I was able to participate in a Zoom meeting with Jered Borup. He described the research study and recommended additional research and studies to explore as I prepared to collect my data.

After exploring seminal methodologists and their case study design protocols, Yin's evaluative case study was the most appropriate for my research because it is the most practical when conducting a program evaluation. Yin (2014) defined a case study as "an empirical inquiry that investigates a contemporary phenomenon (the case) in-depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2014, p. 16). Yin recommended a case study design protocol when conducting a program evaluation and stated that it could be used with both quantitative and qualitative research (Yin, 2003). In his case study design, he discussed four types of case studies: single case, multiple case, holistic, and embedded design. I designed a single case study.

Case studies are an approach to research that supports deeper and more detailed investigation and are applicable when the research addresses a how or why question. Commonly implemented when conducting evaluations, the case study method can prove to be an effective way to evaluate the efficacy of programs in education implemented to promote equitable student success (Yin, 2012). Since case studies can be time consuming, the study could be narrowed to investigate the outcomes at one specific K-12 school to evaluate how closely student success program operations align with their intended outcome. The incorporation of multiple data sources can provide in-depth analysis on perspectives from key participants in the group, such as underserved online students, online teachers, academic interventionists, and mentors.

Additionally, student achievement data can be obtained, then compared with observations and interviews, and analyzed for convergence of findings. This

triangulation of data will add validity and reliability to the case study evidence and can enhance the quality of outcomes (Yin, 2009).

The case study approach provides a way to analyze a real-life issue and document the findings from multiple perspectives. Provided time and resources are available, a case study of this type could provide an important contribution to practice as it explores a shift in funding focus from a regulated accountability and incentive structure to one that provides an increase in educational opportunity that works toward meaningful student success initiatives (Yin, 2009).

Approach to the Case Study

I designed a single case study using Yin's (1994) four recommendations for completing a program evaluation: design the case study, conduct the case study, analyze the case study evidence, and develop the conclusions, recommendations, and implications.

I used the evaluative case study method where I collected the data and used interim analysis to analyze it. I continued interim analysis in a cyclical fashion until the data supported the research questions and fit well with the CoI framework. I used the following protocol based on my research for conducting a case study:

1. Case study design protocol: I determined the required skills needed to conduct the study while developing and reviewing the protocol. As the researcher, I needed a skill set that included the ability to ask good questions in order to interpret the responses; be a good listener; be flexible and adaptive; to have a

firm grasp of issues being studied; and be unbiased by preconceived notions (Yin, 1994).

2. Since my research was a single case study, I first prepared to collect my data. I then distributed the survey to each participant, completed two weeks of on-site observations, and conducted one-semi-structured interview with each participant.

I chose a single case study as my research method because I wanted to explore the contemporary phenomenon of auxiliary support systems in a newly developed online learning program. I studied on-site mentors and online teachers in their real life context.

I used the Community of Inquiry (CoI) theoretical framework when designing the case study. Social presence is the ability of learners to project themselves socially and emotionally, being perceived as “real” people in mediated communication (Garrison & Arbaugh, 2007; Rourke, Anderson, Garrison & Archer, 1999). Cognitive presence refers to the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse (Garrison, Anderson, & Archer, 2000; Garrison & Arbaugh, 2007). Finally, teaching/mentor presence is defined as the “design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson et al., 2001, p. 5). Using these presences as a framework, an effective online discussion will encourage students to not only communicate on a social level but also engage in an academic conversation, while being purposely directed to achieve learning outcomes.

I determined the required skills needed to conduct the study while developing and

reviewing the protocol. As the researcher, I needed a skill set that included the ability to ask good questions in order to interpret the responses; to be a good listener; to be flexible and adaptive; and to have a firm grasp of issues being studied; and be unbiased by preconceived notions (Yin, 1994).

Research Setting

The evaluative case study took place at a small-sized virtual school in a suburban area in Michigan that services K-12 students. The virtual school is essentially a school within a school as it is housed in a lab within the high school's west campus. At the time of the study, the district was the largest school in the county with over 8,000 students enrolled K-12. The district has 564 (6.8%) School of Choice students.

Prior to collecting data for the study, I researched the school's website and spoke to the technology director to gather background information. I found that the conceptual design for the online learning program began in 2014. I read that the district's *Strategic Plan* (2010) called for a district-wide technology and infrastructure upgrade. The upgrade would include network and fiberoptic cable upgrades, as well as to support the proposed 1:1 Chromebook initiative.

In 2015, the district successfully passed a \$32M technology and infrastructure bond where they were able to roll out a 1:1 device program that provided every student a Chromebook. From 2014 to 2019 online enrollments continued to grow, and the district finished the technology and infrastructure upgrades. The aforementioned items laid the

foundation for the online school's existence. When asked about the technology bond and the planning of the virtual school, the district's technology architect said,

Transforming teaching will involve every teacher and administrator in the district going through on-site training over the next few years. The virtual lab is currently in the final design stage but is intended to address student needs at every level. Some who were raised in the distant past may ask, 'Why do these kids need this?' or 'This doesn't look like a classroom' should understand the educational system has been stuck in the past for decades and has not caught up to the way students learn today.

The 1:1 program continued to grow and by the fall of 2020 when the school returned to synchronous instruction following the closure of in-person school due to the COVID-19 pandemic, the program had over 2200 online enrollments including concurrent enrollments, credit recovery students, and full-time online enrollments. The high volume of students was due to the coronavirus pandemic. Many families did not feel safe returning in-person, so they chose the virtual option.

One of the goals in the district's *Strategic Plan* (2015) was to create flexible learning opportunities to meet the ever-changing needs of K-12 learners in the 21st century. The *Strategic Plan* aligned with the district's mission statement with regard to stated that "students' individual social, emotional and academic needs will be met through a school setting that blends traditional classroom instruction, online instruction and community partnerships" (*Strategic Plan*, Strategy III, 2018). The virtual school was slated to open in the 2019-2020 school year servicing Grades 9-12, with plans for

expansion to include Grades 6–8 in 2020-2021, and Grades K-5 in 2021-2022. Due to the COVID-19 pandemic, that did not happen.

Pivoting to Online Learning

During the spring of 2020, schools across the nation shut down for the remainder of the academic year due to the COVID-19 pandemic. Many neighboring districts shut down and could not reopen because their students did not have devices for online learning. The district in this study has already implemented their 1:1 device program. They were able to essentially pivot from in-person to virtual overnight.

While the district managed to provide remote instruction for the remainder of 2020, they needed a plan for reopening in the fall. The pandemic forced the district's hand to open the online academy one year earlier than anticipated. As one of the largest districts in the county, they did not want to lose students to other districts because they did not offer online options for students. Therefore, they were able to pivot from the original plan and opened the online academy virtually overnight. Immunocompromised teachers were given priority preference to become online teachers. In the fall of 2020, the district opened the online academy for students who did not feel safe returning to in-person instruction. The district began the academic year with 2600 students enrolled into the online program. The online academy became the largest school in the district and one of the largest in the county.

In 2021, the second year the online academy was open, the school had 646 online student enrollments. There were 367 full-time virtual students and 279 students enrolled concurrently. The school offered opportunities for full-time virtual students, concurrently

enrolled students who took mostly in-person instruction, students who were working to earn back credit, students who needed credit recovery courses to get on track for graduation, and 5th year students who wanted to earn their diploma.

The school's mission is to provide a high-quality education to full-time students, as well as those who would like to supplement their in-person learning with virtual courses. The school offers flexibility to accommodate the interests and abilities of all learners and match opportunities for enrichment and intervention without sacrificing rigor and high expectations. Students are encouraged to challenge themselves and grow within a virtual learning environment that best fits their needs.

Study Participants

I was purposeful when recruiting study participants. I invited only those employees who were working full-time in the online program. A recruitment letter was emailed to all full-time staff members inviting them to take part in the study. At the time of the study, there were 12 full-time online teachers and 11 part-time online teachers. Of the 12 full-time staff members, nine participants agreed to participate. Those who declined stated they were too overwhelmed with their job duties to take on additional commitments.

The nine participants included two online learning mentors, one academic interventionist, one special education teacher, and five online teachers. Participant demographic information can be found in Appendix C. I met with each participant to address any concerns and offered them an opportunity to ask questions.

Participant One: Mentor Teacher

Participant One was a two-way contact mentor. She has been in the field of education for 33 years and brings experiences as an elementary teacher, a middle school teacher, a typing teacher, and most recently as the online learning program supervisor. She was asked to design and develop the online program in 2014. She said, *“When admin[istration] asked me to develop the online program, I didn’t receive any training, so I researched other districts and designed the program from the ground up.”*

Participant One is also responsible for ordering all the online classes for the online program as well as those concurrently enrolled. She explained that, as enrollment numbers grew, the district explored opening its own online learning school. During strategic planning the district decided to form a school within a school. The online school is housed within the west high school campus.

Participant One was the only one running the online program from 2014 until the online school opened in 2020. She admitted feeling slighted by the district when they did not invite her to apply to be the school’s director when it opened. She said, *“Here I’m the one they tapped to start the program. I did and then when they decided to make it a real school, they didn’t even have the decency to encourage me to apply!”* She went on to say that she has stayed on as the two-way contact mentor because the work is manageable, and she enjoys getting to work directly with students.

Participant Two: Mentor Teacher

Participant Two was the other two-way contact mentor who shared the workload with Participant One. They were both responsible for completing the mandatory two-way

contacts each week. Participant Two struck me as a person who really enjoyed working with adolescents.

Participant Two was overwhelmed, having over 200 students on his caseload, at the time of the interview. Referring to his job duties he stated:

I've got too many students to track. Plus, they gave me 50 to 60 kids in credit recovery, which altered my schedule. I now come in second hour to work and then I stay an hour after school to meet with the credit recovery kids. And you would think that that would be enough to do that. But of course, you can't keep kids away from you during the day. Oh, right. They'll come in and they'll want to sign up for help and most times I can't even stop dealing with them. And that that takes up a big part of my day.

Legislation mandates student and mentor accountability. Students must participate in a minimum of one, two-way contacts per week. These contacts serve as their attendance and can be completed in-person, over the phone, via email, or by assignment completion. Anytime a student does not complete the required weekly contact, it counts as five absences. The two-way contacts are tracked and audited by the state of Michigan to determine the district's eligibility to receive state funding.

Participant Three: Academic Interventionist

Participant Three was hired to be an academic interventionist. He split his time between the high school and the virtual program to support students as they completed their coursework. He recently graduated with his teaching certificate and the academic interventionist position was his first job working in a public school. He was an energetic

and passionate participant. He came prepared with typed notes to his interview in an effort to share his viewpoints on what it means to be a mentor in an online school. According to the participant, his biggest struggle was getting parents to partner with him at home. He said:

Some kids are very shy, some kids are socially anxious, and some kids have parents who are just as anxious. That's why the SEL [social emotional learning] part of the program is so vital. There are these families who're going through it and we see it, you know, obviously, with face to face, but with the online program, if you don't check in with them and get to know them and know what's going on at home, you won't know what's going on with the students and the families. And that plays a role with this...Like some kids who have the support flourish. Some kids just know how to do it they know how to hold themselves accountable, and their family does too. And some kids, that's not what they have at home.

This quote illustrates the commitment the academic interventionist felt toward his students' success and his understanding of the partnership that was often required from families to help their child be successful in virtual learning.

Participant Four: Online Special Education Teacher

Participant Four is one of two special education teachers in the online program with over 23 years of teaching experience working with special needs students. She presented as fun and engaging. She joked with colleagues and students and she said her laid back style puts kids at ease. She said, *"I just love working with our online kids. They*

keep me young.” The special education teacher felt she was able to give more individualized attention to special education students in a virtual format.

Participant Five: Online Teacher

Participant Five is the other special education teacher with 15 years of experience working with special needs students. It was evident from the start of the interview that she was a very compassionate educator who cared deeply about her students. She shared a story about a student who had been involved in a car accident that caused cognitive impairment and seizures. As a result, she had fallen behind in her coursework. Participant Five had started doing home visits with her to keep her on track as her health improved. She said:

That’s the beauty of offering online options for our kids. Online provides a means for them to stay in school even after a debilitating injury. We’re able to service kids with social anxiety, those with medical conditions, and kids from other districts who don’t have online programs.

The participant felt virtual learning offered students that needed special accommodations the opportunity to learn from home as they recovered.

Participant Six: Online Teacher

Participant Six was a veteran teacher with over 19 years of teaching experience who said teaching was her first job out of college. She taught classes at the high school, as well as online classes, and she was one of the district’s technology coaches. In addition, she handled the majority of work orders and technical issues for the online

program. She explained that she never planned to leave the classroom where she taught in-person but she made the move to virtual learning post-pandemic.

When asked about the required mentoring piece in Michigan's 21f legislation, she said she learned about it when she served as the English department chairperson but she did not think her colleagues knew about it. She said lack of time is her biggest concern. She had 312 students and 26 different preps. She felt there was not time to mentor students in a meaningful way.

Participant Seven: Online Teacher

Participant Seven is a high school math teacher with 26 preps and 312 students. She said her caseload was too large for her to provide meaningful support and mentoring. She had over 20 years of experience and decided to move to online teaching when the district returned to in-person classes. She shared that she no longer felt safe teaching in a brick and mortar school for medical reasons.

Participant Eight: Online Teacher

Participant Eight is a mentor teacher for the online program. He serviced students who attend in-person and those in the online program. He handled scheduling, administrative tasks, and mentored 55 students. He shared his biggest struggle was getting parents involved. He said, *"If parents only knew how much more their students could do if they just had that backing at home."*

Participant Nine: Mentor

Participant Nine was the other mentor teacher who assists Participant One with weekly two-way contacts. He began his career in an alternative education program that he

described as a one-room schoolhouse. In that position, he taught all grades including special education. He also worked a middle school English and math teacher before obtaining his special education degree. He taught special needs students for six years before joining the virtual program. Participant Nine was nonchalant and easy going. He felt that he didn't have a lot of extra time to work with students because he was so busy with weekly two-way contact commitments. On a few occasions, I was able to observe his Google Meet sessions with students. At the start of each session, he asked them about their personal lives, extracurricular activities, and took the time to make connections with his students. He said establishing a positive rapport was crucial in the first few weeks of school because, *"Once they trust you and know that you care, they are willing to work and let you help them."*

Data Sources

In this case study, I focused on evaluating support staff members in one online school. According to Yin (2003), there are six sources of evidence for case studies: archival records, documents, interviews, direct observation, participant-observation, and physical artifacts. He contended that the benefits from these six sources can be maximized if researchers follow three principles: use multiple sources of evidence, create a case study repository, and maintain a chain of evidence (Yin, 2003).

In order to develop a greater understanding of the auxiliary support systems being used in the online school, four primary tools were developed to facilitate the case study approach. First, the multifaceted approach consisted of two questionnaires to be completed in January and May. Second, one semi-structured interview was conducted

with each of the on-site mentors, interventionists, and online teachers. Third, staff and student interaction observations were conducted. Fourth, existing student achievement data and parent satisfaction surveys were examined. Each of these tools were developed further in their relationship to the primary research questions. The research utilized a wide range of sources as a means of increasing the validity of the study while developing a more comprehensive picture of mentor effectiveness. The data was compiled and stored using *OakShare*, Oakland University's approved repository. The research findings can be used to inform policies and practitioners, while establishing best practices to improve learning outcomes for future online students.

The following sections describe each data source and its collection approach in more detail. Table 3.1 provides an overview of evaluation methods and tools used to collect data, noting advantages and disadvantages for each data source.

Table 3.1

Summary of Data Sources Contrasting Strengths and Weaknesses

Source of Evidence	Strengths	Weaknesses
Surveys	Establishes background. Information on each participant. Unobtrusive. Easy to conduct.	Subject to bias Questions may be poorly constructed.
Observations	Direct examination of behavior/ activity in real time. Provides information about topics. participants may be unwilling to talk about.	Behaviors change when participants know they are being observed. May be influenced by what the observer chooses to record/ analyze.
Interviews	Can be used to explore new ideas. Follow-up questions can be used to obtain more detail as needed.	Time consuming to conduct and analyze. Limited number of participants.
Achievement Data	Can add contextual information to program outcomes. Can be cost effective because these data are often collected by the district.	Entry errors may decrease accuracy. A data report is often needed to obtain administrative data.

Data Source I: Overt Observations

Observations were the first data collection strategy implemented. In a case study, observation occurs when the researcher makes site visits to gather formal and informal data. It is the act of noting a phenomenon in the field setting through the five senses of the observer and it is considered the gold standard among qualitative data collection techniques (Murphy & Dingwall, 2007). By observing people in their natural environments, researchers not only avoid problems written in self-reported accounts, but

it can also reveal insights such as structures, processes, and behaviors not accessible from other data collection methods, and those that interviewed participants may well be unaware of themselves (Mays & Pope, 1995; Furlong & Christenson, 2010). I visited the online program and conducted overt observations over the course of two months. The observation protocol can be found in Appendix D.

While writing the literature review, I found a survey instrument called the *Community of Inquiry Survey Instrument*. As described in Chapter One and Two, my study was grounded in Garrison et al. (2001) theoretical framework known as Community of Inquiry (CoI). The framework is one of the most researched models of online learning in the last decade (Sanders et al., 2020). I elected to frame the study using the CoI framework's three presences: social, cognitive, and teaching/mentor. These presences can be utilized as online programs are being developed. The CoI framework provides a template to form the online learner's educational experience. The CoI framework has morphed from a theory predominantly used in higher education to include a K-12 adaptation known as the K-12 Community of Inquiry (Stenbom, Jansson, & Hulkko, 2016).

I opted to adapt the existing CoI survey instrument and apply the questions to the observations. The original survey instrument is divided into the three presences: social, cognitive, and teaching. Under each presence is a subset. For instance, social presence includes affective expression, open communication, and group cohesion; cognitive presence includes a triggering event, exploration, integration, and resolution; and teaching/mentor presence includes design and organization, facilitation, direct

instruction. The adapted survey questions were then used as I conducted participant observations.

I conducted observations of the participants as they worked with students over the course of the semester in their field settings. The focus was on interactions between mentors and mentees, and the mentee's behaviors, knowledge, and skills. I used a memoing technique that required me to take field notes of mentors and mentees collaborating. These notes were invaluable when I described each study participant. I also used the observational data to create a narrative report of my findings.

The advantage of conducting observations is that I was able to be in the room observing events and interactions as they were naturally occurring, thus increasing the validity of the study and helping build confidence in the study findings. A second advantage of observation is I was able to learn through watching and listening to the topics that were relevant to the study participants. For instance, what do mentors and mentees discuss most often? What is the level of mentor/mentee engagement? What interactions or discussions are/are not present? A third advantage is that I was able to use the observations to develop questionnaire items in language the participants understood. I was a passive participant therefore did not participate or interact with the study participants.

Data Source II: Surveys

I developed a pre and post survey prior to the start of the study. The survey was administered via Qualtrics and was tested with a small sample of non-participants prior to the final survey was administered to participants. Participants responded to a 12-question

survey which can be found in Appendix F in January, at the beginning of the semester when mentors and online teachers were getting acquainted with their students and students were beginning their online coursework. Participants responded to a second 14-question survey which can be found in Appendix F in May, at the end of the semester when mentors and online teachers were working with students to conclude their coursework.

The initial survey was a useful precursor to the interview. It contained questions to gather baseline data and background information on each participant. It helped identify initial themes and issues to explore further in the research. The second survey aimed to reveal opinions, experiences, narratives and accounts of staff members as they reflected on their work with online students.

Data Source III: Interviews

I used semi-structured interviews for the study. Semi-structured interviews allowed me to be focused on the topic of interest while still providing the autonomy to explore relevant ideas that arose during the interview. During the initial interview, I was able to meet with each participant to explain the study, obtain consent, and answer questions from the participants. The interview protocol and questions can be found in Appendix E.

The interview questions were adapted from Garrison's CoI Framework which was developed as a means to investigate effective online and blended learning environments. Participants underwent individual, semi-structured interviews. After pilot testing, the participants were approached, and informed consent was taken. Each of the

participants were given a copy of the interview protocol to review one week before the interview.

Data Source IV: Existing Data

Finally, I used existing student achievement data such as the number of full-time and part-time online enrollments, course completion, and pass/fail rates. At the conclusion of each school year, parents are also surveyed to offer input and feedback on the virtual program. I reviewed the survey responses, and their feedback was summarized and included with the existing data.

Data Collection Procedures

I collected the data while school was in session during participants' planning time. I completed on-site mentor-mentee observations throughout the winter semester (Data Source I). I created a pre and post survey using Qualtrics (Data Source II). Each participant completed Survey I in January as the semester began. The survey was emailed to each participant via Qualtrics. In May, at the conclusion of the semester, I emailed Survey II to each participant. I worked with the school district's pupil accounting department to gather existing student achievement data. Upon receipt of the data, I de-identified records removing all personal identifiers so student anonymity was maintained (Data Source IV). In February and March, I conducted one semi-structured interview with each participant (Data Source III). Additional data collection procedures are described below.

I interviewed the two on-site mentors responsible for the two-way contacts, one academic interventionist, one counselor, and four online teachers. The participant

interviews took place in-person and virtually depending on the participant's preference. When interviewees were available to meet in-person, I used Voice Record Pro to record the interviews. When interviewees were unable to meet in-person, we met over Zoom with another backup audio recorder. The files were stored on my password protected computer in a password protected file. The estimated time of completion for each participant was two months.

Before each interview began, I took time to review the purpose of the study and answer questions. The interviews took place both in-person and virtually depending on their availability. The interviews were recorded and transcribed. Because the transcriptions were done using voice transcription, I added punctuation and words that were not picked up during the transcription to add clarity of each statement. Participants were each given a copy of the transcript for review and to ensure that I captured each participant's experiences. All personal and confidential information was stored securely in *OakShare*, Oakland University's approved data repository.

Data Analysis

I used thematic analysis to identify the overall themes, subthemes, and patterns. The identified themes and key points were then compiled with reference to the research questions and then crosschecked independently with reference to the online survey responses and observation field notes. I did not analyze all four data sources in the same manner. Existing data was analyzed using descriptive statistics for triangulation analysis.

I used coding and thematic analysis for three of the four data sources. Thematic analysis was used for the interviews, observations, and surveys. Participants completed

two open-ended surveys, permitted the researcher to conduct observations, and participated in one semi-structured interview. Yin's (2003) third and fourth recommendation of analyzing the case study evidence and developing the conclusions, recommendations, and implications were also included in the case study. There were four steps used to analyze the collected data in this study: transcription of each of the interviews; created codes to identify the pieces of data as explained below; analyzed and rationalized the codes by generating reports; and compiled the final propositions by linking the codes back to the initial propositions. Such propositions were derived from the research questions and from interpreting data from some of the other sources such as the survey responses (Atkinson, 2002). The data were analyzed using Garrison et al. (2001) Communities of Inquiry (CoI) theoretical framework to identify overall themes and patterns throughout the data. The CoI framework is described as "a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding" (Sanders & Lokey-Vega, 2020, p. 37). The CoI framework is useful as online teachers and facilitators are developing their courses. The framework encourages online teachers and mentors to cultivate a learning environment where students are respected, and discourse, inquiry, and exploration are encouraged. It is especially important to establish these norms as students begin their classwork because learning online is much different than it is face-to-face. Learning online requires students to possess specific skills and attributes. As Brindley (2014) emphasized, "studying at a distance requires maturity, a high level of motivation, the capacity to multi-task, goal-directedness, and the ability to work independently and

cooperatively” (p. 278). Therefore, it is vital to student success to include activities and collaborative experiences for students to work individually and in groups.

Additionally, this chapter includes sample demographics, using tables to complement the summary. Nine participants were interviewed for this study. Appendix C indicates the participant demographics. All nine participants shared their race, all identifying as White, non-Hispanic. The ages of the participants ranged from 25 - 54 years in age. The demographic and survey questionnaires served as supporting research data. Following this method, ensured that the CoI methodology was embedded throughout the data collection part of the research process.

Data Source I: Overt Observation Data Analysis

At each level of analysis, constant comparison was used to distill the data further, until themes emerged from the data. Included in the chapter are tables and graphics used to present detailed code and theme data, as well as graphics and vignettes from the individual interviews used to emphasize key themes and the resultant theory.

Table 3.2

Community of Inquiry Coding Template (Garrison, 2011)

ELEMENTS	CATEGORIES	INDICATORS
Social Presence	Open Communication Group Cohesion Affective Expression	Risk-free expression Encourage Collaboration Emoticons
Cognitive Presence	Triggering Event Exploration Integration	Sense of puzzlement Information exchange Connecting ideas
Teaching Presence	Design & Organization Facilitating Discourse Direct Instruction	Curriculum & Methods Sharing personal meaning Focusing discussion

As shown in Table 3.2, an educational relationship of inquiry is a conceptual connection that is built between two people, a mentor and a mentee, where they engage in critical discourse. A mentor, otherwise known as a facilitator or a coach, is the person assigned to support the mentee's learning process. The mentee is the person who needs assistance in his or her learning. Together, the mentor and mentee develop a collaborative relationship with the aim to resolve an educational issue. For this study the educational issue was the impact auxiliary support systems have on the academic success of online learners.

I then used deductive thematic analysis to extrapolate information from the interviews and observations based on my existing knowledge of the CoI framework. When applied to student success in an online environment, these overarching themes and

subthemes of have the capability to vastly improve the online learning experience in the virtual program.

Data Source II: Survey Data Analysis

Pre and post surveys were given to participants during the course of the study through Qualtrics. Information regarding demographics, training and professional development, challenges, and experiences of the participants were included in the survey questions. This information collected from the surveys were used to triangulate the three other data sources. For the quantitative data, I used descriptive statistics. For the qualitative data, there was not enough information provided to include in the analysis.

Data Source III: Interview Data Analysis

The interview protocol and questions are provided in Appendix E. I used transcript analysis on the first examination of the data. Transcript analysis involves the examination of transcripts using a coded scheme (Anderson et al., 2001). After transcript analysis, I used thematic analysis on the data as described above. The goal was to determine how mentors construct reality and think about situations without the confines of a specific question-answer format. There were three levels of analysis: (a) open coding, (b) selective coding, and (c) thematic coding. Open coding includes labeling concepts, defining and developing categories based on their properties and dimensions. Selective coding is done in the final stage of data analysis after core themes have emerged from the coded data and subthemes have been identified through open coding. Selective coding, or axial coding, refers to the final stage of data analysis to be completed after core concepts emerging from the coded data categories and subcategories have been

identified through open and/or axial coding. At each level of analysis, constant comparison was used to distill the data further, until themes emerged from the data.

I read through each transcript and highlighted all relevant and interesting quotes that related to my research questions. I read through each a second time and sorted and organized the quotes by a priori CoI themes. Having them organized in this manner allowed me to parse them into relevant themes and subthemes.

I divided the data into meaningful categories and segmented the data by CoI theme. I then aligned each theme with the CoI framework focusing on presences: social, cognitive, and teaching. Once I defined the emerging themes and subthemes from coding the interviews, I was able to use the same themes while analyzing the observation and survey data.

All interviews were coded manually during open coding. The interviews were analyzed in batches of three participants, allowing analysis time before moving on to additional participants. Each batch was coded and analyzed for themes. Transcripts were uploaded into computer software, Delve, for further analysis. Each interview was coded again using the software and then compared to the manual coding initially completed during the interview collection. Coding the interviews again, having all nine interviews to compare, aided constant comparative analysis techniques critical to grounded case study methodology. The process allowed for emphasizing key points during coding. In the next analysis phase, selective coding, categories were created that emerged from the similarities in the open codes.

Data Source IV: Existing Data Analysis

Existing data that were used in this study included: online enrollment, student handbook, and the district strategic plan. This data was used for further triangulation of the data sources. These data were analyzed by cross checking information from the interview results.

CHAPTER FOUR

FINDINGS

Overview

This evaluative case study analyzed auxiliary support systems in one online school. The study was based on Garrison's (2011) Online Community of Inquiry (CoI) theoretical framework where he took the Lipman (2003) CoI theory and adapted and applied it to the field of online learning. The online CoI elements and categories have been suggested to guide the relationship of inquiry framework and are displayed in Table 3.1 in the previous chapter. These elements have proven successful in analyzing online teaching and mentoring in online environments. Using these categories I was able to identify themes and subthemes as I coded the interview transcripts, and analyzed the data from the surveys, observations, and student achievement data.

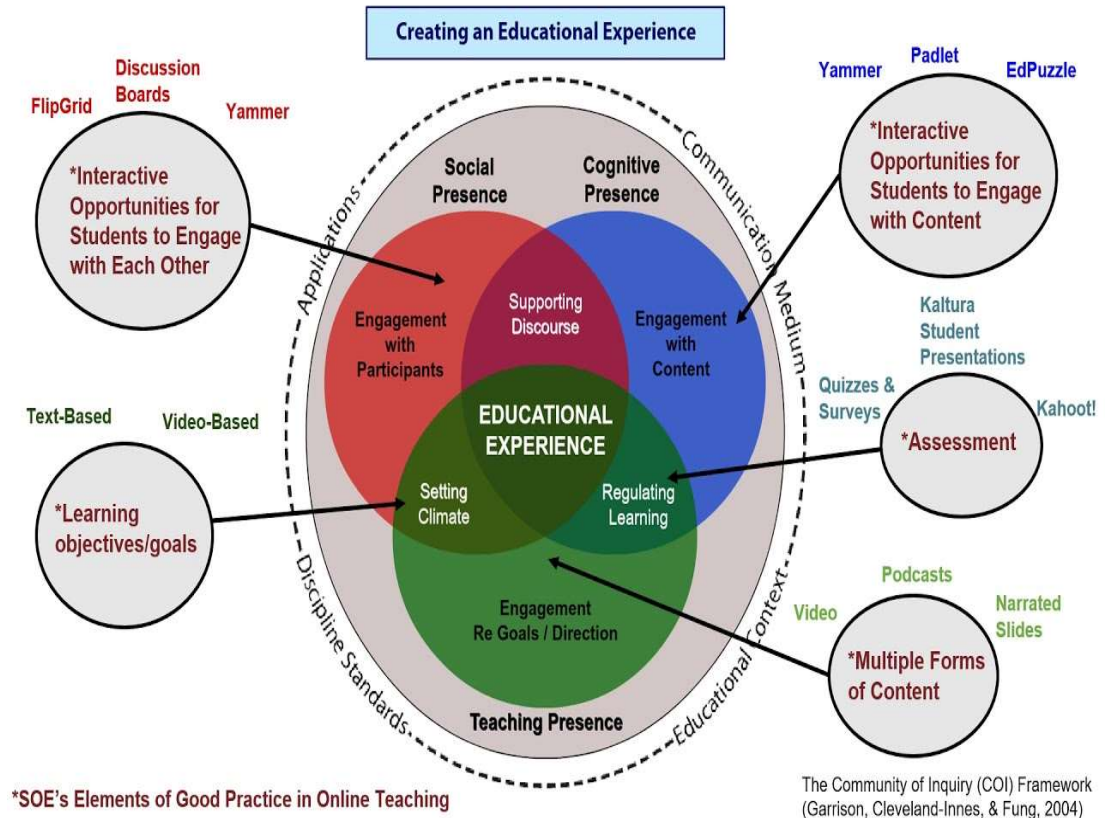
The format of my research followed Yin's (2014) seminal research on case study as a methodology and sought to answer the research questions:

- Are online students more successful when they have an assigned mentor with whom to work?
- How might we improve how we prepare our mentors (e.g. training, support, and professional development) to better serve our students?

The themes and the related sub themes described in Chapter Three connect to the existing research on the concept of support models in online schools and the CoI framework to create the online student's educational experience as illustrated in Figure 4.1.

Figure 4.1

Community of Inquiry Framework: Creating an Educational Experience



Three themes emerged during the coding of the data: social presence, cognitive presence, and teaching presence. Four subthemes also emerged: supporting discourse, educational experience, setting climate, and selecting content. These themes and the related subthemes connect to the chapter two literature review and the CoI framework. This chapter describes findings related to each type of presence that emerged from the study.

Theme One: Social Presence

According to Roblyer (2015), “Social presence is the perception of ‘connectedness’ or actually being with someone in a virtual environment” (p. 427). It is the basis of collaborative learning and the foundation for meaningful, constructivist

learning online. “In the context of online learning, social presence is described as the ability of learners to project themselves socially and emotionally as well as their ability to perceive other learners as ‘real people’” (Boston et al., 2010, p. 68). Social presence is established when progressing through the phases of acquiring a social identity, having purposeful communication, and building relationships (Kreijna, Van Acker, Vermeulen, and Van Buuren, 2014). It is the presence where classroom community is created. It is the communication and interaction between and with the instructor, facilitators, and all members of the class.

Social presence is the main element needed before cognitive and teaching/mentor presence can occur (Sanders & Lokey-Vega, 2020). There are also three components of social presence: affective expression, open communication, and group cohesion (Critten, Lingle, & North, 2021). While interviewing the online English instructor, I was fascinated by the creative ways he described setting the tone of his classroom and organizing content. He said, “*a big difference teaching online is that you have to be extremely organized and you have to keep your pulse on students at all times.*” This particular instructor was impressive. When he referenced keeping tabs on students, he said he is aggressive about redirecting them whenever they’re off-task. He leverages an in-house monitoring tool called Go Guardian to monitor students while they work and it allows him to send personal messages to their screen while they work, give warnings when they are on inappropriate sites, and shut down Internet access if warranted.

Two subthemes emerged from within the social presence: setting climate and supporting discourse. The three CoI presences are interconnected so the subthemes overlap as illustrated in Figure 4.1.

Subtheme: Setting Climate

Participants commented that there are shared commonalities between teaching in-person and teaching online as well as significant differences (Critten et al., 2021). In both teaching realms, teachers use strategies to promote a safe, positive environment where students feel comfortable expressing themselves. The interventionist shared,

So sometimes you get these kids and they're wild online and others are more timid like feral children, but they haven't had anyone teach them how to be social in an online world. So sometimes I feel like kids are just socially anxious and we have to somehow teach them how to behave online.

The online teachers and mentors shared the importance of using humanization strategies and interactive opportunities to foster social presence. One strategy I observed was *affective expression*, where the online instructors would encourage students to express their personalities in a virtual environment.

The online teachers and mentors shared the importance of using humanization strategies and interactive opportunities to foster social presence. One strategy I observed was *affective expression*, where the online instructors would encourage students to express their personalities in a virtual environment. The online teachers were cognizant to plan lessons that encourage discourse and engagement.

While conducting observations, I noted assignments that were meant to establish a positive classroom culture while promoting social presence online. For instance, one of the first assignments required students to set up their Canvas profiles where they added a photograph, a brief bio, and pertinent information they would like to share. Others used icebreaker activities, team challenges, and group activities to promote collegiality.

Cultivating supportive online learning environments is a crucial first step that begins with nurturing classroom cohesion and community through social presence. Social presence remains the key to a successful learning experience, and understanding social presence, with its critical connection to learning and community building, allows us to better support faculty and students. Content providers, online teachers, and support staff members should understand a wide selection of tools, media, and reflective activities that help faculty assist students in taking responsibility for their own learning; providing feedback and mindful assessments to help faculty meet learning outcomes and guide student learning; and implement change in small steps is the key to understanding which strategies work and which lead to frustration and discontent (Whiteside et al., 2014).

Subtheme: Supporting Discourse

Participants noted concerns about how students did not know how to communicate politely and effectively online. It was evident from speaking to the study participants that students needed to be taught effective communication strategies with one another and with the online teachers and mentors (Sanders & Lokey-Vega, 2020). The special education teacher noted,

I think someone who is able to communicate with the kids, who is able to meet with them weekly via Google Meet, in-person, or over the phone, is so much better than an email back and forth saying 'this is what I'm working on.' One thing that I do is when they send me their weekly progress, I double check it because they are not always honest...I think contact with the parents and making sure they are aware what their kids are working on is super important.

The special education teacher felt that communication not only with students but also with parents was paramount to supporting discourse.

Other communication strategies included using introductions as a starting point for building social presence, blending professional and personal information to get to know one another as multidimensional individuals, to make sure to model by offering your own personal introduction, and to encourage freedom of expression by asking students to use all different forms of media and content (discussion boards, photos, videos, etc.). Lastly, increase teaching and cognitive presence over time by incorporating current observations to increase social feel and humanize the course.

Participants expressed the importance of setting a positive tone and classroom climate from the start of the course. One online teacher commented,

Organization and problem solving are struggles for kids just starting out in online. I mean, outside of what it takes to be a good teacher I would say building relationships with kids, good communication with parents, good communication with staff, just like, a lot of the core classes have practices or mini assignments that you have to do.

The importance of communication to helping students in online learning environments seemed to permeate every participant conversation.

When it comes to online learning, students have to learn how to learn online. In the online program, students are permitted to work on their own time and at their own pace. This can become problematic for students who struggle with organization and for those who are not intrinsically motivated. The interventionist felt that establishing a positive rapport and establishing an open line of communication is important. He also emphasized the need for parental involvement. Likewise, the academic interventionist said,

I think being able to make those classroom connections is so important. I mean I can't ask people to do work if I don't know them. And, with students, I noticed that it's like, really big because they're just so used to having everybody tell them what to do. So, I feel like once I make that connection then I can help them, I'm very honest with them as well. So that plays a really big role. I remind them that they have plenty of time to get work done but they don't if they're not motivated or if they don't have familial support.

To assist students in starting out successfully, mentors might consider additional strategies for promoting social presence such as: creating opportunities for students to engage with one another and with the course content. Participants mentioned that creating connections is more difficult in an invisible classroom where students are working asynchronously than it is in a face-to-face environment where conversations occur organically. It is especially important to establish a safe space for students to

communicate from day one of the course. Students are entrenched in social media. A simple way to invite students to engage might be to create a Tik Tok challenge where students create a short video introducing themselves.

Theme Two: Cognitive Presence

Cognitive presence is the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse (Garrison et al., 2001). It consists of motivating students to cognitively engage with course content. Iturbe-LaGrave (2020) describes it as a process consisting of:

- Motivating students to cognitively engage with course content
- Training staff members
- Monitoring, supporting, and regulating learning
- A four-phase process: triggering event such as an issue or problem; exploration through reflection and discussion; meaning construction as students discuss ideas; application of knowledge both in the course and outside the classroom.

While coding the interview data, student engagement and motivation was raised frequently. Teachers expressed that it is harder to motivate students online and keep them engaged. It is especially difficult for the online staff because they do not create their own content. They rely on the prepackaged content provided through APEX Learning. One online teacher commented, *“When you teach through a computer it is often hard to gauge how students are doing academically and emotionally. I can’t tell if they’re having a bad day or if they aren’t feeling well.”* Another teacher said, *“As much as I enjoy online teaching and the flexibility, I miss the connections we can make face-to-face.”* I

was able to infer from their comments that they enjoy teaching virtually, but they feel it is easier to build rapport and community face-to-face.

Subtheme: Support

A reoccurring theme was that of support. Every participant mentioned support in some manner. Participants felt supported by their colleagues and the director of the program, but the lack of parental support was difficult. It was a consistent complaint and a detriment to the program's success, according to the participants. The interventionist said,

I keep talking about wraparound services, but we have to include in that [concept] because if you don't have that parental support, it's really hard to make our students feel successful. I also know that online learning is so isolating for some of these kids, you know, they've gone from being with other kids their whole lives to now being at home on their own, and they have a lot of free time.

The isolation students were experiencing in online learning was a problem that was difficult for the mentors to solve. Creating community in an online learning environment is critical for the student success.

Another mentor said,

My biggest challenge has probably been getting parents' support. Because, as I said, before, these kids are doing their work at home alone while their parents are working. If parents are there and are supportive it would make my life so much easier.

He went on to say that kids stay up too late and struggle to wake up to complete their work. He said, *“I’m supposed to coach them, and it makes it kind of hard to target these kids who are up until 2-3 a.m. and then they have to get online and they’re not motivated.”* Parental support is part of the community that is needed to support students in online learning. Mentors expressed frustration at not having this important component of community support.

Borup et al. (2014) argued that the term parent in K-12 and blended settings include any individual (parent, grandparent, or other relative) with whom a child lives, but that in an online setting, the role of the parent can be any adult who is not employed by the online program who has an established relationship with the student and a legal responsibility to care the child. He also noted that parental involvement in brick-and-mortar settings has been researched and there are well established frameworks. In online environments, there is little research and only two frameworks designed specifically for K-12 online and blended programs.

One of the online teachers shared her thoughts on being an effective teacher and regulating learning in an online environment. She said,

I think to be an effective online teacher or interventionist, you need the support of the admin[istration], you need the support of the counselors, you need the support of the teachers, and you need the support of the families. And then then you can target everything because you need to be synced in. You need to be synced in with what every class is doing. If I do that, then I can help kids.

A community of support not only assists the students but also supports teachers and mentors that are crucial to the success of online learning.

Subtheme: Social-Emotional Support

As far as social and emotional support, the interventionist was emphatic that students need a lot of emotional and academic support. He said, *“When they feel like they have a person who cares about them, that’s everything.”* He went on to say,

Sometimes it's just a chat about what they're doing this weekend and other times it gets deeper about things bothering them in their personal lives. But I would say that they benefit [when] they know people are there for them because they feel isolated. They feel alone. So, the moment you're like, 'Hey, I'm here for you. You have questions. I've got you.' It gives them a sense of belonging.

The interventionist believed that students needed to feel that they were a part of the online classroom community to prevent the isolation many of the students were experiencing. The interventionist believed it was his responsibility to establish a rapport with students on a personal and academic level, giving them social and emotional support during their online coursework.

Subtheme: Caseloads and Lack of Time

Support staff members described their caseloads and how the lack of time severely limited their time to mentor students. The two mentors are supposed to provide mentoring and coaching to students, but they have no time to help students while working to log all the two-way interactions. One mentor commented,

Admin[istration] doesn't realize the time management that this requires. Because as soon as you start to help one kid, it's taking time away from the two-way contacts that have to be done by Tuesday at midnight every week. You only have so much time to get those done. The contacts are tied to funding so it's crucial we do them and you only get a week to get them done before the new week begins.

Most notable about the two-way interactions was how the state requires districts to use the contacts to track and record attendance and the state then uses them to determine state funding eligibility. Should a student miss a two-way interaction, it is equivalent to five absences. Therefore, the stakes are extremely high for staff to not only record the contacts, but also to make sure students are completing them every week. Another participant commented,

I work until midnight on Tuesday nights to meet the deadline each week. I stay up because you've got the procrastinators who don't finish until the last second. So, I have to wait until 11:30 at night on Tuesday and log that content from work. It's got to be logged by 12 o'clock. Because it's tied to funding, we have to get it done.

They have been given caseloads that are impossible to support in an effective manner.

It is important to note that elementary and middle school students are taught and mentored by their classroom teacher so, although not perfect, it is superior to the model for high school students. High school students have an online teacher through the content provider, their teacher of record employed by the district, and support staff members who are assigned to mentor students in addition to their other roles in the district.

Two participants served as the mentor teachers. Each of them had over 200 students on their caseload. They described being so busy doing their two-way contacts that it left no time to mentor students in a meaningful way. The academic interventionist and online teachers were the ones who provided wrap-around support services to students.

Subtheme: Training and Professional Development

The online social studies teacher had positive things to say about collegiality and administrative support but he, and many others, complained about the lack of training. He said,

I was just telling admin[istration] that I don't know what PD is going to look like for next year, but don't think I think PD needs to be a whole day. We need training sessions where every virtual employee has to attend. I told them I'd run it, but we need a cohesive explanation of how the programs works and the expectations. I mean, right now the expectations aren't even clear.

The frustration due to the lack of training and professional development specific to being an effective online mentor or teacher was expressed by all participants. Training and professional development for online mentors and teachers is readily available based on the review of the literature as discussed in Chapter Two. The research indicated that mentors that are trained are more likely more effective than those without training.

Theme Three: Teaching Presence

Out of the three presences, teaching presence, specifically instructor and support staff presence, are strong predictors of student success. The online program is run by

district employees and the virtual course content is purchased through APEX Learning. Students access their courses from a learning management system called Canvas. Therefore, the online teachers are not designing their courses in the traditional sense. The teachers, facilitators, and interventionists provide support as students navigate through their coursework. It is vitally important that teachers are aware of teaching presence and establish norms from day one. Teaching presence is “the design and facilitation of cognitive and social processes for the purpose of realizing intended outcomes” (Oyarzun, Conklin, & Barreto, 2017, p. 107). It is a significant factor when accounting for student satisfaction and perceived learning. Both face-to-face and online teachers employ strategies that foster safe and positive learning environments. They are pedagogical experts in their subject areas and they support students emotionally (DiPietro, 2010). Yet, online teachers must also spend time monitoring, facilitating, and troubleshooting technology issues that in-person teachers do not manage (Ferdig et al., 2009).

Teaching presence can also be difficult to cultivate in online environments because teachers are working in a different location than their students. It is easier to track student progress when they are face-to-face. The special education teacher noted,

Because there are kids in my room all the time, ... and I still get contact with them. I still get to sit with kids. I still get to laugh with them and learn about them. The kids that are here in the building, they're my greatest reward, because I actually still get all of the two-way contacts done and I get to know them and that's the best part. When we don't see them, it's much harder to get to know them.

Mentor One agreed and said,

On a typical day I make a lot of student contacts, I have 200 contacts to complete weekly. I send out emails and then record contacts, make phone calls, talk to kids who aren't working, etc. I also do all of the online ordering of courses from outside vendors, through GenNet. It doesn't leave a lot of time to get to know students on a personal level and it's frustrating.

Both the interviews and observations revealed examples of teaching presence in the online classrooms. The design, organization, facilitation, and direct instruction were evident. Course design, curriculum components, and organization were accomplished through the APEX courses. Facilitation and direct instruction took place during Google Meets. Teachers had mandatory Google Meets where students were required to check in and they also offered opportunities to meet with students one-on-one when they needed individualized support. I noted teachers utilizing multiple forms of content to engage students including videos, podcasts, and various web 2.0 tools.

Subtheme: Parental Involvement

Parental involvement was mentioned in a number of the interviews. Across the board, staff members expressed frustration with the lack of involvement from parents. In the online program, the expectation is that parents of elementary school students are the learning coaches for their children. And, although each parent signed the online learning handbook acknowledging their commitment to being the guide for their students, it was evident while speaking to staff members that there are varying degrees of support. The interventionist expressed frustration saying,

I'm sorry, but these kids need a compassionate human right near them when they're learning. And if mom and dad aren't there, how much learning is going to take place is different if they're doing it their parents and have a stay at home mom or dad that can be one-on-one with them. But you can't have six and seven year-olds just out on their own online, right?

Likewise, the mentor teacher said, *"I can't emphasize enough that parents need to understand that this is virtual. So, their contact information and communications with us is crucial. That needs to be reinforced at all times."*

The lack of parental support was an important theme that emerged throughout the interviews. All of the participants expressed resentment with the lack of parental engagement. They also understood parent support and involvement was key to online learning.

Subtheme: Technology

Technology troubleshooting is another important aspect of teaching presence and auxiliary support. One teacher complained, *"I like APEX but one huge downfall is that we have no local control when they have technology issues on their end."* He said that, as a result, students fall behind and they are helpless until the program is back online. And another teacher said, *"What we really need is a full-time tech person here to provide on-demand tech support to struggling students."* Technology issues have the power to stop learning until they are fixed. Mentors and teachers shared that the learning lost when technology issues arose was significant and disruptive to their engagement. It also impacted the student's ability to complete their work.

Subtheme: Organization

Although the online program does not create the courses they offer, there is still a need for organization. Staff members expressed the need for front-loading information for parents and students. They invite families in for a back-to-school orientation where they present information, expectations, and an online learning handbook. Parents are asked to read and sign the handbook acknowledging their understanding. The school also posts helpful information and resources on the school's website and on social media to support family learning and support of students.

Subtheme: Engaging with Content

The online program uses APEX Learning as their content provider and Canvas for their learning management system. Students navigate their coursework through modules. The online teacher is their teacher of record and the mentors and interventionists are responsible for providing wraparound services to them as they complete their work. Due to the large caseloads in the program, staff commented about how complex it is. When asked about the difference between teaching in-person and online learning, one teacher said, *"There are so many layers of complexity with online learning and it takes a lot of time to keep students organized and engaged. Because they're learning on their own it can be a very isolating experience."* This quote revealed the difficulty of moving from traditional classroom skills to learning in a different modality with a different skill set that must be acquired by online students.

Students have an assigned homeroom teacher and an online teacher. The homeroom teacher helps the mentors with two-way interactions for attendance and the

online teachers provide content support. The expectation is that students spend one-hour per class period per day in order to have time to complete each course. It can be difficult for students to stay engaged and motivated because they primarily work individually. Therefore, the instructors and support staff spend a lot of time keeping students on-track, motivated and engaged.

Conclusion

The study revealed four key findings:

1. Students require a caring community to be successful in online environments (Archambault & Larson, 2015; Cavanaugh, Barbour, & Clark, 2009).
2. On-site mentors need training. They stated they had no training prior to becoming mentors and even admitted to seeking training opportunities on their own time.
3. Schools that have embraced on-site mentoring models have proven advantageous in helping students overcome the challenges they face in virtual courses.
4. Mentors are especially important for at-risk students who often lack motivation and strong support systems in their homes (Borup & Drysdale, 2014).

After conducting the study, it was evident that students need the support of their mentors as they work through their classes. Mentors provide students with advising tools and resources, offer daily support and encouragement, help troubleshoot technology issues as they arise, motivate students when they become frustrated, and help them stay organized so they can fully engage in their learning activities. They also spend a considerable amount of time redirecting students and encouraging them to get back on task. While conducting observations, students were exploiting their class time by

socializing and pretending to work while the mentor teacher attempted to get them motivated and back on track. Other students slept during class and many times the mentor teacher would ignore them.

During the study, it became abundantly clear that each of the participants had been assigned their mentoring roles without any training and little oversight. The lack of time to complete their normal job duties along with mentoring students also had negative results. It limited the time they could spend on their other essential duties. The findings were consistent among all the participants. They admitted to being asked to be mentors for online students but they were never offered any formal training or oversight from their administrators. Once they committed to being a mentor in the online program, they were left alone to learn their new role. As a result, there were inconsistencies as to the effectiveness of the mentors and student support varied from one on-site mentor to the next.

Following the case study, it appeared that the number one issue for on-site mentors was the lack of training and professional development opportunities. Each of the participants stated they were asked to serve as mentors while already working other full-time positions in the district (e.g. online teacher, counselor, secretary, and high school teacher). They each agreed to take on the additional job duties. They quickly discovered, however, that there would be no additional compensation for their efforts, no training, and very little oversight and accountability from their supervisors. Based on the study, it is recommended that mentors collaborate to create a learning environment that is welcoming, supportive, and flexible to meet individual student needs. They must also

connect students to content level experts in the building with subject area knowledge when students are struggling. Finally, the district must design and implement an online mentor-training manual to distribute to on-site mentors as they are getting started. Additional training and professional development is necessary to provide the auxiliary support systems for students' success in online coursework.

The validity of the CoI framework rests upon the quality of the community of inquiry among the mentors and mentees in the online learning realm. The case study revealed that collaboration, open discourse, strong relationships, cognitive presence, mentor presence, and social presence are all interrelated components to a successful online learning program. The case study also explored the existing program in an attempt to answer the manner in which student outcomes improve when auxiliary support systems are in place. It also evaluated the effectiveness of the existing program and included the types of training and support offered to the on-site mentors. The study findings will be used to inform and guide a full evaluative case study in other virtual schools.

CHAPTER FIVE
DISCUSSION AND IMPLICATIONS FOR PRACTICE

Introduction

In my dissertation, I addressed the training and professional development on-site mentors received prior to becoming mentors, the types of support mentors needed as they worked with online students, and I evaluated successful mentoring models currently being used by schools.

Despite the continued growth and popularity of online learning, the field is still in its infancy. One of the biggest challenges continues to be the high level of attrition rates in online schools when compared to graduation rates in face-to-face environments. Existing research shows that there are consistent issues associated with online learning such as students feeling isolated and disconnected, low levels of student support services, and a lack of motivation. As a result, school districts have begun to assign school staff members to serve as on-site mentors and academic interventionists in an effort to reduce the alarming attrition rates while improving the sense of community and its corresponding community of inquiry for K-12 online learners.

Review of Critical Findings

The study focused on auxiliary support systems in one online school where students are required to have an assigned mentor/facilitator. The online school utilizes online teachers, academic interventionists, and mentors to provide these wrap-around support services. They play an important role by providing students the mentor presence that their online teachers cannot. They focus on developing relationships with students, monitoring their learning, and keeping them motivated to engage in learning activities.

Findings from the study suggest that establishing and maintaining a vibrant learning community is invaluable to students and that teachers must be committed to being flexible, supportive, accessible, and responsive while maintaining structure and consistency in virtual courses. Research examining the impact of on-site mentors on learning outcomes is limited and additional research is needed. The findings of this study revealed the need for trained mentors who have a manageable caseload of students, parental involvement, and time for collaboration.

The results of the study revealed the need for a re-examination of the district's interpretation of Michigan's 21f legislation that directs online programs to assign an on-site mentor for every student enrolled in an online course. Mentors are to provide critical support to online learners. Mentors develop a rapport, keep students on schedule, and provide guidance and support to make learning online management and less overwhelming (Borup, 2018). Currently, the district employs a liberal definition of the term *mentor*. Legislation mandates mentors serve as the liaison between the students, parents, online instructors, and administrators. In this case study, the mentors in the online academy completed the required two-way interactions each week and had very little time to coach students. The academic interventionist was the one study participant who adhered to Michigan's mentor mandates.

It was evident that although the district adheres to Michigan's Section 21f legislation by assigning a mentor to every online student, they are applying Michigan's online learning law in a liberal manner and not as it is intended. Indeed, the district permits all students in Grades K-12 options to enroll in both face-to-face courses and

online courses through the online academy, but there were too many students on each mentor's caseload to mentor effectively. As a result, mentors spent the majority of their time completing the two-way interactions and had very little time to work with students.

Implications of Findings

This evaluative case study was based on the theoretical model of online learning known as the Community of Inquiry (CoI) framework (Garrison, 2003; Garrison et al., 2000; Lipman, 2003). The framework is based on Dewey's pragmatic understanding of the education field. It acts as a guide that supports the educational experiences of online learning as emerging from the interaction of three presences: social presence, cognitive presence, and teaching/mentor presence (Swan, Garrison, & Richardson, 2009). The results of the study were consistent with my original hypothesis; that the district is adhering to Michigan's online learning law but it has not been implemented with fidelity. Per 21f legislation, each online student must be assigned a mentor/facilitator with whom to work. The district has assigned one mentor per student but the teacher/mentor to student ratio is disproportionate.

Based on a thorough review of the literature and analyzed data, assigning auxiliary support systems to online learners contributes to student success. This case study looked at one online school over the course of one semester. The school was in its second year of existence at the time of the study. There were four themes that emerged from this study: the need for cultivating a community of inquiry focusing on the three presences: social, cognitive, and teaching. It is harder to create this community online than it is in face-to-face classrooms. The case study revealed four key findings:

1. Students require a caring community to be successful in online environments (Archambault & Larson, 2015; Cavanaugh, Barbour, & Clark, 2009).
2. On-site mentors need training. They stated they had no training prior to becoming mentors and even admitted to seeking training opportunities on their own time.
3. Schools that have embraced on-site mentoring models have proven advantageous in helping students overcome the challenges they face in virtual courses.
4. Mentors are especially important for at-risk students who often lack motivation and strong support systems in their homes (Borup & Drysdale, 2014).

After conducting the study, it was evident that students need the support of their mentors as they work through their classes. Mentors provide students with advising tools and resources, offer daily support and encouragement, help troubleshoot technology issues as they arise, motivate students when they become frustrated, and help them stay organized so they can fully engage in their learning activities. They also spend a considerable amount of time redirecting students and encouraging them to get back on task. While conducting observations, students needed mentors that constantly redirected their attention to their school work. Without the supportive network of mentors, online students are more likely to fail.

During the study, it became abundantly clear that each of the participants had been assigned their mentoring roles without any training, little oversight, and no compensation. Each of the participants stated they were asked to serve as mentors while already working other full-time positions in the district (e.g. online teacher, counselor, secretary, and high school teacher). They each agreed to take on the additional job duties.

The lack of time to complete their normal job duties along with additional responsibilities of mentoring students impacted their effectiveness with student engagement and learning. The findings were consistent among all the participants. They were never offered any formal training or oversight from their administrators. Essentially, once they committed to being a mentor in the online program, they were left alone to learn their new role. As a result, there were inconsistencies as to the effectiveness of the mentors and student support varied from one on-site mentor to the next.

The validity of the K-12 CoI framework rests upon the quality of the community of inquiry among the mentors and mentees in the online learning realm. The case study revealed that collaboration, open discourse, strong relationships, cognitive presence, mentor presence, and social presence are all interrelated components to a successful online learning program. The case study also explored the existing program in an attempt to answer the manner in which student outcomes improve when auxiliary support systems are in place. It also evaluated the effectiveness of the existing program and included the types of training and support offered to the on-site mentors. The study findings will be used to inform and guide a full evaluative case study in other virtual schools.

Limitations

A limitation to this study was sample size. The online school is in its second year of existence and had fewer than 30 employees. Therefore, random sampling was impractical. All employees were invited to participate in the study. Of the 30 only 12 are full-time and only nine agreed to participate. This case study was limited to nine participants so the findings, although valid, are not as thorough as if the single case study

were to be expanded into a multiple case study across the country. Having a larger sample size would increase the validity and reliability.

Interviews were vital to the case study and understanding the participant experience as a mentor. Internal validity was accomplished by including direct quotes from the interview transcripts. Adding additional interviews would permit a deeper understanding of each participant while allowing me to further test emerging themes. The results of the research could have been strengthened by an additional interview toward the end of the study. At the time of the interviews, it was the middle of the semester and they were mostly content with the rhythm of their duties. It would be interesting to interview each of them at the beginning and end of a semester to compare their perceptions and attitudes as they reflected on the semester. I would also use a completely different set of survey questions. The responses were acceptable for baseline data (e.g. demographics), but the qualitative questions did not receive many responses. I learned their educational background, years of experience, positions, and an aerial view of their job duties in the online program but nothing that would help answer the research questions.

Directions for Future Research

The results revealed from this research study demonstrated the need for additional research. The next logical step for this line of research would be to duplicate this study on a larger scale with other online learning programs in Michigan that utilize wrap-around support systems with their virtual learners. Also, few research studies have explored student perceptions and experiences in online learning programs. It would be beneficial

to conduct a follow-up study focusing on student perceptions of online learning to compare the findings with the original research on teachers, interventionists, and mentor perceptions and experiences.

Additionally, the K-12 CoI continues to evolve in research. Emotional presence is a fourth presence that has emerged from the framework in recent years (Stenbom et al., 2016). Emotional presence has been reviewed and recognized as a valuable addition to the framework. Cleveland-Innes and Campbell (2012) defined emotional presence as “outward expression of emotion, affect, and feeling by individuals and among individuals in a community of inquiry, as they relate to and interact with the learning technology, course content, students, and the instructor” (p. 283). A future study could be expanded to include the CoI’s fourth presence, emotional presence.

As K-12 schools increase the number of online offerings and enrollment numbers continue to flourish, the quality and rigor of virtual programs is called into question. Districts have embraced this alternative mode of learning because it is a method that provides quality teaching and learning at a lower cost. However, little research has been dedicated to studying the support systems students need in order to thrive in a virtual environment. Additional empirical studies are needed to determine best practices for improved results. It is imperative that researchers, course providers, school administrators, online teachers, academic interventionists, and on-site mentors work together to improve the auxiliary supports offered. Although these efforts can be difficult, it is critical to the success of all online students. Additional research is needed to specifically define and empirically validate the methods and techniques required for on-

site mentors to be successful so that programs can be effectively developed and implemented in the K-12 online learning arena.

It is recommended that mentors collaborate to create a learning environment that is welcoming, supportive, and flexible to meet individual student needs. They must also connect students to content level experts in the building with subject area knowledge when students are struggling. Finally, the district must design and implement an online mentor-training manual to distribute to on-site mentors as they are getting started. Additional training and professional development is necessary to provide the auxiliary support systems for students' success in online coursework.

Finally, I chose thematic analysis for this study (Gareth & Hayfield, 2021; Peel, 2020). I would do a narrative analysis if I were to repeat the study. Perhaps it was because I gained such valuable information from the interviews. For instance, without interviews I would not have known that the two mentors only conduct two-way interactions, leaving no time for mentoring. The mentoring was done by the two academic interventionists (only one of whom was part of this study). Repeating the study using narrative analysis with several interviews over the course of one full school year would reveal further insights.

Conclusion

This study focused on auxiliary support systems in one online school where students are required to have an assigned mentor/facilitator. The online school utilizes online teachers, academic interventionists, and mentors to provide these wrap-around supports services. They play an important role by providing students the physical

presence that their online teachers cannot. Mentors focus on developing relationships with students, monitor their learning, and keep them motivated to fully engage in learning activities.

The K-12 CoI framework was used to examine the combination of social, teaching/mentor presence, and cognitive presence. Findings from the study suggest that establishing and maintaining a learning community where students have access to auxiliary support systems is indicative of student success in the invisible classroom. Additionally, stakeholder input is needed, and professional development and training opportunities are vital if districts are to cultivate supportive learning experiences in online communities (Rueter, Dykes, & Masters, 2019).

To improve the success rate for online students in the state of Michigan, districts must embrace the concept of wrap-around support models for students. Presently, the online teachers, interventionists, and two-way contact mentors are doing the best they can to lend support. Despite filling this important role, however, mentors from the case study described a need for training and professional development, a professional community that affords time for collaboration, the support of administration, and clearly defined roles and responsibilities for each member who contributes to the cultivation of the K-12 community of inquiry.

APPENDIX A
IRB EXEMPTION LETTER



Institutional Review Board

Date: January 25, 2022

Study #: IRB-FY2022-136

Study Title: THE IMPACT OF ON-SITE MENTORS IN IMPROVING LEARNER OUTCOMES IN ONLINE SCHOOLS: A CASE STUDY

Submission Type: Initial

IRB Decision: Exempt

Research Team:

Kate White

Julia Smith

Based on applicable federal regulations, the above referenced study has been determined to be Exempt, with the following categories:

Category 1. Research, conducted in established or commonly accepted educational settings that specifically involve normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

Letter and Consent Document:

This letter along with the IRB approved (date-stamped) consent document can be found in Cayuse in the [Submission Details](#) page under [Letters](#) and [Attachments](#), respectively.

The IRB date stamped consent document must be downloaded and used in

consenting participants.

Permission from Research Sites:

Please note the following:

- This IRB exemption determination letter means that this research has met one or more of the federal criteria for exemption per 45 CFR 46.104- Exempt Research.
- Before the research is initiated, permission to conduct research at a given site must be obtained from all research locations listed in the IRB submission. You must keep copies of all such permission letters for your files.
- It is the responsibility of each researcher to follow all applicable policies and procedures of any outside institution where the research will be conducted.

Modifications:

Any changes to this exempt project must be reviewed by the IRB prior to initiation by submitting a MODIFICATION request. Do not collect data while the changes are being reviewed. Data collected during this time cannot be used in research.

Record Retention:

Exempt projects will be retained by the IRB office for three years after the last action on the project.

You are approved to start the research. Please retain a copy of this notification for your records.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

APPENDIX B

PARTICIPANT INFORMATION SHEET

Participant Information Sheet

Summary of Key Information

I am asking for your participation in a research study titled **The Impact of On-site Mentors in Improving Learner Outcomes in Online Schools: A Case Study**. The study is being led by Kate White, Principal Investigator, Department of Educational Leadership at Oakland University. The faculty advisor for this study is Dr. Julia Smith, Department of Educational Leadership at Oakland University. The project is research and your participation is voluntary. The purpose of the research is to examine mentor roles in a K-12 online learning environment over the course of one semester. There are no anticipated risks to study participants and there are no alternative procedures or course of treatments pertaining to this study. Benefits include the opportunity for mentors, interventionists, and online teachers to learn effective strategies to improve learner outcomes for online learners.

What the study is about

The purpose of the study is to examine mentor roles in a K-12 online learning environment. Mentors, also known as facilitators, coaches, and academic interventionists, are critical partners in ensuring students' academic success in navigating virtual learning. I am particularly interested in conducting research that will answer how educators can make K-12 mentoring effective for all online learners. I intend to analyze the impact of on-site mentors in improving learner outcomes in online schools. I also plan to investigate which facilitator strategies are most influential when students are deciding whether to drop out or to complete their online courses. Understanding these relationships could then inform teacher preparation programs, online schools, and facilitators as to where they should focus their efforts to reduce student dropouts and improve outcomes for all virtual learners.

What I will ask you to do

I will ask you to participate by responding to one questionnaire and a one-on-one interview. I will also ask for your permission to allow me to observe you working with online learners over the course of one semester. The individual time commitment will be approximately 30 - 60 minutes per month for the duration of one semester. The questionnaires will take approximately 15-20 minutes each to complete. The interview will take approximately 30 minutes. Each observation will last 15 - 30 minutes over the course of one semester. The total amount of time you will spend participating in the study will be approximately 60 minutes per month over the course of five months.

Potential Risks and Discomforts

The probability of harm or injury (physical, psychological, social, or economic) occurring as a result of participation in this research is minimal. A risk is minimal where the probability and magnitude of harm or discomfort anticipated in the proposed research are not greater, in and of themselves, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. There is a risk of breach of confidentiality. Confidentiality will be maintained by storing all paper data (notes and transcripts) in password protected flash drives and password protected computers and locked filing cabinets with researcher access only. An audio/video recording device will be used to record participant interviews and observations. Upon completion of the research, recordings will be destroyed immediately after transcription and transcripts will be destroyed after 5 years.

Benefits

Benefits include the opportunity for mentors, interventionists, and teachers to learn effective strategies that will help your online learners. I hope that, in the future, other people might benefit from the results of this study through improved understanding of mentor-mentee relationships and successful strategies for improving learner outcomes in online schools.

Compensation for Participation

For taking part in this study, you will receive a \$25 Amazon gift card. You will receive compensation at the conclusion of the study, after you have completed the survey questionnaires and you have participated in the interviews.

Audio/Video Recording

An audio/video recording device will be used to record participant interviews and observations. Upon completion of the research, audio recordings will be destroyed immediately after transcription and transcripts will be destroyed after 5 years.

Privacy/Confidentiality/Data Security

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of storing all paper data (notes and transcripts) in password protected flash drives and password protected computers and locked filing cabinets with researcher access only. After (5) five years, any digital data will be deleted, and hard copies of all data will be shredded. If a report or article develops from this research, your identity will be protected to the maximum extent possible through the use of pseudonyms assigned at the beginning of each study. Your

name will not be used at any time during data analyses. If a report is written about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of Oakland University or government agencies if you or someone else is in danger or if required to do so by law.

Participation and Withdrawal

Your participation in this research study is completely voluntary. You may refuse to participate before the study begins, discontinue at any time, or skip any questions/procedures that may make you feel uncomfortable, with no penalty to you.

Who do I contact if I have questions about this study?

The main researcher conducting this study is Katie White, a doctoral student at Oakland University, working under the direction of Dr. Julia Smith, the faculty advisor for my dissertation project. Please ask any questions you have now. If you have questions later, you may contact Katie White at kkimball@oakland.edu or at [REDACTED], or Dr. Julia Smith at jsmith15@oakland.edu or at [REDACTED].

PARTICIPANT RIGHTS

If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Oakland University Institutional Review Board (IRB) for Human Participants at 248-370-2762, or email the IRB staff, Judette Haddad, PhD at haddad@oakland.edu or Kate Wydeven at kwydeven@oakland.edu.

Please note that email communication is neither private nor secure. Though I am taking precautions to protect your privacy, you should be aware that information sent through email could be read by a third party.

Sharing De-identified Data Collected in this Research

De-identified data from this study may be shared with the research community at large to advance science and health. We will remove or code any personal information that could identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information we share. Despite these measures, we cannot guarantee anonymity of your personal data.

Follow up studies

We may contact you again to request your participation in a follow up study. As always, your participation will be voluntary and we will ask for your explicit consent to participate in any of the follow up studies.

APPENDIX C
PARTICIPANT DEMOGRAPHICS

Participant Demographics

Position	Years of Experience	Number of Preps	Caseload	Other Position in the district?
two-way contact mentor teacher	25	0	225	No
two-way contact mentor teacher	10	0	236	No
Academic interventionist	1	0	329	Services In-person & online
Online math teacher	18	18	364	Caseload at the HS & Online
Online SE teacher	23	18	18	DEI building team
Online ELA; BVL/HS	15	16	364	Instructional coach
Online SS teacher	23	13	364	No
Online ELA teacher	22	15	205	Teaches in-person & online
Online science teacher	12	14	364	No

APPENDIX D
OBSERVATION PROTOCOL

Observation Protocol

Principal Investigator

- Design observation protocol that includes:
 - Name of person observing
 - Name of site
 - Date of event or activity
 - Names
 - General descriptions, or coded designations of those being observed
 - General observations (using rich detail to describe conversations, behavior, and activity observed)
 - Space for reflective notes (e.g., concerns, hunches, further data needed, the observer's impact on the situation)
 -
- Make initial contact with participants
- Conduct observations
- Send thank you

OBSERVATION GUIDE

Observer's name _____

Name of site _____

Date of Observation _____

Event/activity (e.g., routine school day)

Research participants

Descriptions of those observed

Date (include hours) _____

Start time _____

End time _____

Observation Protocol

(Notes: record level of participation, descriptions, interpretations, observations)

- NON-PARTICIPATION _____
- PASSIVE PARTICIPATION _____
- MODERATE PARTICIPATION _____
- ACTIVE PARTICIPATION _____
- COMPLETE PARTICIPATION _____

Activity/event:

Descriptive notes:

Reflective notes:

APPENDIX E
INTERVIEW PROTOCOL

Interview Protocol

Project: A case study on the impact of auxiliary support systems in improving learner outcomes in a K-12 online school.

Principal Investigator

- Make initial contact
- Conduct interviews
- Send thank you
- Make a follow-up call or send email for additional information/clarification if necessary
- Send a draft of narrative to interviewee for member check
- Follow up with clarifying questions

Pre-meeting: Discuss the state of Michigan's 21f legislation that details online coursework and district obligations to assign a mentor to each online student.

Date:

Time of Interview:

Location:

Interviewer:

Interviewee:

Position of interviewee:

Interview Questions

1. Describe a typical mentoring session. What takes place during a mentor session (time spent, content, etc.)?
2. What makes a good mentor/interventionist?
3. What have been your greatest challenges/rewards as a mentor/interventionist?
4. How might we improve or impact how mentors are prepared? Consider training, support, and professional development.
5. What do you need that would make you a more effective mentor/interventionist?
6. What would contribute to greater success for online learners?
7. When you talk to students, what do they feel they need in order to be more successful in their online courses?

Follow-up Interview Questions

1. What do you know now that you wish you had known when you started mentoring students?
2. What have been your greatest challenges/rewards?
3. How might we improve or impact how mentors are prepared?
4. What makes a good mentor/interventionist?
5. What would make your job as a mentor easier?
6. What would contribute to greater success for online learners?

APPENDIX F
SURVEY QUESTIONS

Survey Questions
Survey I Questions

1. What is your name?
2. Please provide your gender as you currently identify:
3. What is your role in the district (check all that apply)?
 - a. Mentor
 - b. Academic interventionist
 - c. Online teacher
 - d. Mentor for two-way contacts
 - e. Other
4. How many years of experience do you have in this role?
5. What other roles do you fill in the district?
 - a. Classroom (in-person) teacher
 - b. Librarian/Media technician
 - c. Paraprofessional
 - d. Counselor
 - e. Administrator
 - f. Other
6. When asked to serve as a mentor/interventionist/online teacher, were you offered any of the following?
 - a. Monetary compensation (e.g. stipend)
 - b. Compensation time
 - c. I was offered no additional compensation
 - d. Other
7. How many students are you currently assigned in your mentoring/teaching role?
8. Please list your responsibilities as the online teacher/mentor/interventionist.
 - a. Orienting students to online learning
 - b. Troubleshooting technology issues
 - c. Navigating course content
 - d. Communication with online teacher/mentor
 - e. Progress monitoring
 - f. Fostering relationships
 - g. Other
9. What are students' biggest obstacles when completing online coursework?
 - a. Time management
 - b. Technology issues
 - c. Lack of motivation
 - d. Lack of engagement
 - e. Feelings of isolation and disconnectedness
 - f. Other

10. What do you feel is working well in your work with online students?
11. What do you feel isn't working well in your work with online students?
12. Is there anything else you would like to add that hasn't been asked in these questions?

Survey II Questions

1. What is your name?
2. Please provide your gender as you currently identify:
3. What is your role in the district (check all that apply)?
 - a. Mentor
 - b. Academic interventionist
 - c. Online teacher
 - d. Mentor for two-way contacts
 - e. Other
4. How many years of experience do you have in this role?
5. What other roles do you fill in the district?
 - a. Classroom (in-person) teacher
 - b. Librarian/Media technician
 - c. Paraprofessional
 - d. Counselor
 - e. Administrator
 - f. Other
6. How many students did you mentor and/or teach online this semester?
7. What kind of support network, if any, do you have in your position?
 - a. Administrative support
 - b. Collegial support
 - c. Parental support
 - d. None.
 - e. Other
8. Did you seek training or spend time after hours to become a better mentor/interventionist/online teacher?
 - a. Yes
 - b. No
9. Please describe the things you did (if anything) outside of work to become a better mentor/interventionist/online teacher.
10. Describe your greatest successes in your position working with online students.
11. What challenges did you encounter while working with online learners this semester?
 - a. Course content
 - b. Time constraints
 - c. Technology issues
 - d. Learning management system issues
 - e. Lack of motivation.
 - f. Lack of support (administrative, collegial, district, parents, etc.)

- g. Other.
12. How might we improve or impact how mentors/interventionists/online teachers are trained/prepared?
 13. In your opinion, what would contribute to greater success to online learners?
 14. Is there anything else you would like to add that hasn't been asked in these questions?

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