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Résumé de l'article

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"Everybody is their own Island": Teacher Disconnection in a Virtual School

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Abstract

Virtual schooling is a recent phenomenon in K-12 online learning. As such, the roles of the online teachers are emerging and differ from those of the traditional classroom teacher. Using qualitative interviews of eight virtual high school teachers, this study explored teachers' perceptions of their online teaching role. Teachers expressed a sense of disconnection from their students, the profession, and their peers as a result of limited interactions due to significant institutional barriers. Researchers discuss the implications of this disconnection as well as future avenues for research.

Keywords: Virtual schooling; K-12 online learning; online teaching; teacher-student interaction; disconnection

Virtual schooling is a recent and growing form of distance education at the K-12 level. Since its inception in 1994 with Utah's Electronic High School (Center for Educational Leadership and Technology, 2008), U.S. online learning programs have spread to all but two states (Watson, Murin, Vashaw, Gemin, & Rapp, 2010). Several organizations, including states, universities, school districts, consortia, charters, and private enterprises, direct and manage virtual schools (Clark, 2001; Watson & Kalmon, 2005). However, the exact number is unknown as there is no central repository of programs and some states do not track programs by delivery model (Watson & Ryan, 2007). For example, Kansas (a state that does track K-12 online schooling in their state), saw the number of online programs grow from fewer than five in 2000-2001 to more than 25 in 2006-2007 (Watson & Ryan, 2007). While this example may not be indicative of all states, it does illustrate the potential rapid growth that has occurred in some jurisdictions.

The explosive growth of virtual schooling can be attributed to several factors. A major driving force is the educational promise of virtual schooling. Research on student achievement has indicated that online instruction is as effective as face-to-face instruction (Cavanaugh, 2001; Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004; Means, Toyama, Murphy, Bakia, & Jones, 2009). This "no significant difference" finding has helped educators and parents overcome the fear of a lack of quality in distance education and promoted greater adoption of online learning as a viable educational alternative. The expansion of virtual schooling has also been accompanied by an expansion of virtual school teachers' roles in an online environment. While the characteristics and behaviors of good face-to-face teachers are similar for virtual teachers (Davis et al., 2007), there are new teacher roles, responsibilities, and instructional strategies that need to be employed in an online environment to support student learning (Davis, 2007, November; Davis & Roblyer, 2005; Murphy & Manzanares, 2008; Murphy & Rodriguez-Manzanares, 2009b). However, due to the nascency of K-12 online learning, research has only begun to explore teacher roles in these distributed environments.

The purpose of this study was to explore how teachers perceived their role in a supplemental, asynchronous, self-paced, statewide virtual high school. We begin by examining teacher roles in K-12 online learning. Next, using interview data from eight virtual high school teachers, we explore how the limited interactions teachers had with their students resulted in teachers feeling isolated and a disconnection from their traditional view of their role as a teacher. Finally, we conclude by discussing the three changes institutions can make to improve teachers' perceptions of their role through enhanced interactions, along with three avenues of potential research.

Literature Review

Teaching online is a relatively new phenomenon for most virtual school teachers. A survey of 178 virtual school teachers found that 93% had five years or less teaching experience online. In contrast only 37% of respondents had five years or less teaching experience face-to-face and a larger percentage (43%) had between 5 years and 15 years of teaching experi-

ence (Rice & Dawley, 2007). Another, more recent survey of 595 virtual school teachers found that over 77% were female and 23% were males. Ninety-two percent of teachers had bachelor's degrees and 62% indicated they had earned a master's degree (Archambault & Barnett, 2010). While we have some understanding of who is teaching at virtual schools, we know less about how the teaching occurs and, more specifically, how teachers and students interact in online environments. A useful way to examine teacher interaction and the role of the teacher in a K-12 online environment is the community of inquiry (COI) framework (Garrison & Arbaugh, 2007).

COI is a conceptual framework that emphasizes the interplay of three key constructs to create deep, meaningful learning experiences in distance education. These constructs work together to create a community that facilitates critical thinking and learning. According to the framework, the absence or imbalance of any one construct impacts both the learning and sense of community as a whole. The three interplaying constructs (see Figure 1) include teacher presence, cognitive presence, and social presence.

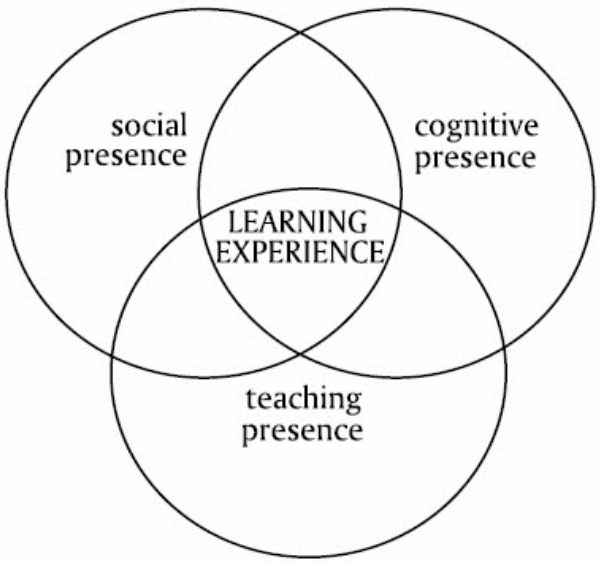

Figure 1. Community of inquiry constructs.

1. *Teacher presence* is the "design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001). Indicators of teaching presence are teachers who clearly communicate course objectives and instructions, facilitate student progress and learning, and provide meaningful feedback.

2. *Cognitive presence* is the ability of participants "to construct and confirm meaning through sustained reflection and discourse" (Garrison & Arbaugh, 2007, p. 161). Indicators of cognitive presence include events that trigger exploration of the subject, integration where meaning is constructed, and resolution where learners apply their new knowledge in contexts outside of the classroom.

3. *Social presence* is the ability for participants to project their personality and conversely feel a sense that others in the community are real people. Participants identify with the community and develop relationships (Garrison, Anderson, & Archer, 1999). Social presence is not a property of the medium but the individuals' ability to move past the medium and establish a sense of immediacy, connection, and co-presences between participants (Nippard & Murphy, 2007). Indicators of social presence include humor, self-disclosure, and the use of informal language to show affection.

The role of interaction is found in the social presence and teacher presence constructs, emphasizing the importance of teacher-student interaction through clear expectations, group collaboration, productive discourse, and meaningful feedback. Typically, social presence emphasizes more student-student interactions and community building, while teacher presence emphasizes teacher-student interaction. However, in rolling enrollment models where there is little, if any, student-to-student interaction the teacher often assumes the role of facilitating the social presence as well (DiPietro, Ferdig, Black, & Preston, 2008; Roblyer, 2006). Bransford, Brown, and Cocking (1999) aptly described these interactions as the glue around the content that creates a sense of community in any learning environment. These constructs of social, cognitive, and teacher presence translate to core behaviors many virtual school teachers exemplify in the online classroom.

Teacher Roles in Virtual Schools

Many of the same characteristics that make teachers successful in the physical classroom make them successful in the virtual classroom (Davis & Roblyer, 2005; Davis et al., 2007). However, teacher roles have expanded (Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009) and require modification for an online environment (Davis & Roblyer, 2005; Murphy & Manzanares, 2008; Murphy & Rodriguez-Manzanares, 2009b). Davis et al. (2007) described three roles teachers undertake in a virtual school environment, while Ferdig et al. (2009) extracted eight potential roles based on published standards and research of online teaching (see Table 1).

Table 1

Taxonomies of Teacher Roles and Responsibilities in Virtual School Environments

Davis (2007, November) taxonomy		Ferdig et al.'s (2009) taxonomy	
Roles	Responsibilities	Roles	Responsibilities
Teacher	Presents activities, manages pacing, rigor, etc. Interacts with students and their facilitators Undertakes assessment, grading, etc.	Teacher	Teach students within the online context including interacting with, teaching content, classroom management, and course management.
		Course facilitator	Provides support for the student within the virtual school program.
Designer	Designs instructional materials Collaborates with team of teachers to construct online course(s)	Instructional designer	Create the course online using effective learning and design strategies.
Site facilitator	Local mentor and advocate for students(s) Proctors & records grades, etc.	Local key contact	Assists student in registering and accessing virtual courses
		Mentor	Provides academic tutoring and assistance to students
		Technology coordinator	Facilitates technical support for both educators and students
		Guidance counselor	Acts as an academic advisor to students enrolled
		Administrator	Provides the instructional leadership

Focusing upon the role of the teacher (Davis, 2007) or teacher and course facilitator (Ferdig et al., 2009), we examine this literature through the lens of the three COI constructs.

Teacher Presence

The vast majority of literature related to the role of virtual school teachers is focused on

teacher presence (see Ferdig et al., 2009). Davis and Roblyer (2005) identified course planning/organization, verbal and non-presentation skills, collaborative course design, effective question strategies, and involving and coordinating student activities among different sites as roles that online teachers have to assume and modify for an online environment.

DiPietro et al.'s (2008) study of best practices found that teachers demonstrated managerial and communication skills that helped them establish a sense of presence in the online environment. Interviewing 16 Michigan Virtual School (MVS) teachers, DiPietro et al. found teachers in distance education had to assume a greater managerial or technical role in online learning environments than in traditional classrooms to prevent students from getting lost or forgotten. Additionally she found that feedback and teacher presence were central to student motivation. Analysis of the interviews indicated that successful teachers established a strong presence in the course by logging in regularly, providing prompt feedback, engaging in the discussion board, and monitoring students' progress. However, DiPietro et al.'s study did not verify if these reported behaviors were actually implemented or if students consequently perceived a greater sense of community.

Roblyer (2006) echoes DiPietro et al.'s findings. Interviewing administrators from three successful virtual high schools, she identified specific policies regarding feedback and regular student-teacher interaction. At Florida Virtual School teachers were required to respond to student inquiries within a 24-hour period and contact, by phone, every student and parent in their class once a month. Similarly Idaho Digital Learning Academy required that teachers telephone inactive students. Thus, teacher presence was established through student communication. This study constituted interviews from three administrators at three virtual high schools and thus may be limited to their specific institutions.

Cognitive Presence

Of the three COI constructs, cognitive presence is the one that has the least amount of literature. A false assumption that some online teachers make is that students want to be left alone to do their work. Drawing on the American Psychology Association's framework for learner-centered principles for online teaching, McCombs and Vakili (2005) found it critical that teachers "avoid the assumption that online learners are those who prefer less personal contact with instructors, are independent learners, have high motivation to learn, are self-disciplined and have high personal self-efficacy" (p. 1592). This advice was directed to online teachers teaching adult learners and may be even more applicable to adolescent learners.

Murphy and Rodriguez-Manzanares (2009a) suggested that motivation is not self-generated or intrinsic; but rather, teachers play a pivotal role in motivating young adults who are even less likely to be autonomous. This was supported by the research that indicated that while adult may be autonomous, self-regulated learners, younger adults often lack the ability to regulate their own learning through self-discipline and intrinsic motivation (Barbour & Reeves, 2009; Cavanaugh et al., 2004; Cavanaugh, Barbour, & Clark, 2009; Rice, 2006). Thus these students may need more support. Finally, it should be noted that the line between designing, facilitating, and directing instruction (i.e., teacher presence) and

sustaining reflection and discourse on that instruction/content (i.e., cognitive presence) is a fine distinction.

Social Presence

There is also a significant amount of literature on social presence in mediated environments. Ferdig et al. (2009) identified multiple studies on best practices and standards promoting social presence via teachers providing multiple channels and opportunities for communication and providing prompt feedback, two activities supported by DiPietro et al.'s (2008) research on best practices of successful online teachers.

However, some virtual teachers struggle to create meaningful interactions with students in a mediated environment. Harms, Niederhouser, Davis, Roblyer, and Gilbert (2006) argued that teachers received "little or no foundation for effectively communicating with students at a distance" (p. 2). Yet, communicating and teaching in an online environment was distinctly different from that of a physical classroom environment (Murphy & Rodriguez-Manzanares, 2009a). Off-the-cuff interactions that were casual and informal in nature and spontaneously happened inside and outside of the physical classroom had to be "premediated" and "consciously promoted" in an online environment (Murphy & Manzanares, 2008 p. 1068). Murphy and Rodriguez-Manzanares (2009a), based on 42 teacher interviews, identified that the absence of visual presence and cues required that virtual teachers find new ways of interacting and building rapport. However, teachers struggled to find meaningful ways to do this. Analyzing the same interview data, Murphy and Rodriguez-Manzanares (2009b) found that virtual teachers did not yet view the online classroom as a community with "familiar faces, spontaneous interactions, and automatic social presence" (p. 13). While this study was limited to the experiences of Canadian teachers and their perceptions may not be universal, they do illustrate the importance of helping teachers develop communication strategies to establish both social and teacher presence in order to build a sense of community online.

Since teacher, social, and cognitive presences are important to the learning ecosystem, teachers need more formal opportunities to develop these skills. Too often, teachers first learn critical online teaching behaviors on the job. Rice and Dawley (2007) found that 62% of virtual school teachers reported receiving no training in advance of their first online teaching experience. However, 90% indicated that they engaged in ongoing professional development provided by their online institution. When exploring the type of training teachers received, the focus was on foundational knowledge, tools, and instructional design. Despite this training, based on the 536 open-ended responses, Rice and Dawley found that a sense of isolation from both students and teachers was one of the top three themes cited. Due to the study's quantitative design, the authors did not explore the "why" behind teachers' sense of isolation in the virtual environment.

Methodology

The purpose of this study was to explore how teachers viewed their position, purpose, and

place in a supplemental, asynchronous, self-paced, virtual high school. This led to the following research question: How do teachers perceive their role as online teachers? To answer this research question we used case study methodology. According to Stake (1995) the use of case study is appropriate when the goal is to understand and concentrate on a singular, unique phenomenon. Utah's Electronic High School (EHS) was the case for this particular study.

We conducted eight semistructured telephone interviews with EHS teachers over a three-month period in 2009. Semistructured interviews allowed researchers to explore perceptions, feelings, and attitudes of participants and explore a broader range of topics than more structured interviews (Fontana & Frey, 2000). All interviews were digitally recorded and transcribed verbatim. We used Ruona's (2005) method to organize and code the data. Specifically, we used a constant comparative method of coding to identify themes (Ezzy, 2002), which highlighted similarities and differences among participants.

The Case

There are nine virtual schools operating in Utah (Watson et al., 2010). EHS, the only state-led program, is the largest in Utah and one of the largest in the United States with almost 50,000 course enrollments (i.e., a single student could be enrolled in multiple courses and counted each time in this enrollment figure). EHS serves a diverse student body. Fifty percent of students enrolled for credit acceleration, 30% for credit recovery, and 20% for both purposes. Students can enroll in any of 66 unique courses across 11 different disciplines. Course offerings range from the typical (i.e., algebra, chemistry, English) to the advanced (i.e., calculus, history) to the more unique (i.e., astronomy, Navajo language). EHS teachers developed the curriculum using Utah's *State Core Curriculum Standards*.

At the time of the study, EHS employed four administrative staff, one part-time counselor, and 76 licensed teachers. A large majority of the teachers worked part-time and were contracted between one to five hours a day (Webb, 2008). Data from February 1, 2008 to January 31, 2009 indicated a student-to-teacher ratio of 233:1 and a student load ranging from 2 to 1,726 students over 198 sections. Seventy-two percent of teachers taught a single class consisting of two to four quarter-credit units.

There are several policies that make EHS unique. The program model is open entry/exit, allowing students to enroll at any time. Consequently, students proceed through the course at their own pace with little, if any, student-to-student interaction. Enrollment and courses are free to Utah high-school aged students. Beginning October 2007, students had to complete the course within a six-month timeframe and remain active (i.e., submit an assignment within a thirty-day period) or be dropped from the course. Lastly, EHS grants credits to the student rather than deferring to the student's residential high school. However, they do not award failing grades (i.e., a student who fails a course, withdraws, or is removed due to inactivity suffers no consequences).

Participant and Class Characteristics

Eight teachers were selected for the study. The teachers were selected using purposive sampling (Patton, 1990). We used pseudonyms, date ranges, and, in some instances, generic course titles to protect the anonymity of participants. Examining class completion data from February 1, 2008 to January 31, 2009, four teacher/class case pairs were identified in the top and bottom 30% of class completion rates.

Table 2

Study Participants and Class Characteristics

	Discipline							
Teacher / class characteristics	English		Mathematics		Science		Social science	
High/low completion	H	L	H	L	H	L	H	L
Quarter 1 course/ grade	Eng. 12	Eng. 9	Lower-division	Upper-division	Elective	Elective	U.S. Hist.	U.S. Hist.
Quarter 1 completion rate	20.8%	5.1%	15.2%	0.0%	30.2%	18.5%	21.0%	20.6%
Course completion rate*	39.2%	7.5%	22.6%	0.0%	45.1%	47.4%	37.4%	33.8%
Quarter 1 course size	106	985	197	108	116	135	62	155
Course size (quarter units combined)	183	1821	388	138	161	197	126	417
Face-to-face teaching (*n* = years)	14	14	15	14	32	18	22	18
EHS teaching (*n*= years range)	3-5	10-15	3-5	10-15	3-5	10-15	10-15	3-5

Note: H = high completion class; L = low completion class; Classes constitute two to four quarter units.

All participants were highly qualified teachers in their subject matter according to *No Child Left Behind*. Six of the eight teachers worked part-time for EHS and full-time in brick-and-mortar schools during the day. One teacher worked full-time for EHS and another worked part-time for EHS and nowhere else. The English 9 teacher had significantly higher student numbers as she worked full-time at EHS compared to the other part-time teachers. Participants averaged 18 years face-to-face teaching experience compared to only 6.9 years teaching in an online environment.

In terms of professional development, participants received limited, structured training for online teaching through EHS prior to teaching their initial course(s) at EHS. New teachers receive an hour and a half face-to-face meeting or phone call depending on the teacher's geographical location with the director of EHS. Here teachers receive an overview of how EHS works and go over their contract expectations. New teachers learn about the school and online teaching by accessing resources/handouts posted in the virtual faculty room, reaching out to EHS' lead teacher, and follow-up phone calls as needed. Existing EHS teachers have access to professional development in the form of an annual face-to-face faculty meeting; multiple two-day face-to-face workshops throughout the year; regular email communications to all teachers on general teaching topics; phone calls and emails to individual teachers for specific needs; hour-long, synchronous (recorded and archived) webinars every other month; and monthly hour-long question and answer sessions.

Six of the eight participants had experienced online learning as student themselves. Exposure to online learning as a student ranged from one college class to an entire master's degree. The influence this experience had on teachers varied. One teacher expressed more empathy for students with busy lives as he struggled to discipline himself to complete the course with competing home life demands. Another articulated frustration with lack of feedback from professors. This teacher identified prompt feedback as a key skill that teachers need to demonstrate fully, something which she felt strongly about because of the absence she experienced in her own online education. The remaining teachers did not delve into how their experiences as students influenced their teaching role.

Results and Discussion

The major theme that emerged from the interview data was teachers' sense of disconnection. Exploring this theme further, we uncovered three types of disconnection: disconnection from their students, from their traditional notions of what it meant to be a teacher, and from their fellow teachers. While teachers wanted to have a sense of connection with their students, profession, and peers, structural barriers made it difficult. In the following section, we describe these three disconnections and discuss the implications for teacher attitudes, behaviors, and community.

Disconnection from the Students

Teachers felt disconnected from their students for a variety of reasons. One reason was the absence of the physical cues students gave in a traditional classroom setting. In this online environment, teachers were never certain if students understood the subject matter, and they missed the instantaneous feedback in the form of visual cues. As Mark stated,

> One of the reasons I love education is I like the interchange. You know, the instant feedback, the look in the face, the look around the room to see if somebody got it. And that's kind of difficult with an online class. And sometimes students will send me an email afterwards

> saying, "Thanks for this help" or "Thanks for explaining of what you [the student] wanted." You know, something like that. But it's not like it's immediate feedback that you get in the classroom. So I do miss the interchange with the students.

This absence and need for the cues of students' grasping the material ties back to a sense of teacher presence. Similarly, teachers in studies by Lai and Pratt (2009) and Murphy and Rodriguez-Manzanares (2008) struggled to navigate with the absence of students' physical cues, which could help them interpret silence and student understanding.

Tamara felt the lack of responsiveness was a challenge since she never felt she knew why students were disengaged.

> There are a lot of those voiceless students. Sometimes they think to enroll into it and they never, you know, you send them an email, "Are you interested?" You may or may not hear back from them. You don't know if the email is even right. I don't get a response back. Sometimes I get an undeliverable. Sometimes I don't. You know, I'm not very good at saying, "Stick with it. You'll do fine." Because if I don't hear back from them and they don't respond back, I don't even know if they are there anymore.

Not knowing why students were struggling contributed to her feeling disconnected from them. Traditional methods teachers could employ to investigate why students are struggling such as walking down the classroom row, catching the student in the hallway, or talking with another teacher in the teacher's lounge are not options for teachers in an online environment (Murphy & Manzanares, 2008; Murphy & Rodriguez-Manzanares, 2009b). Moreover, beyond emailing the student, teachers expressed that they did not know what else to do to reach out and engage.

One teacher viewed social interactions as something the students did not want in an online environment: "My feeling is that the reason they are taking this is because they want to get through it and not chit chat with the teacher, and so I try to keep it more of a professional and business approach to their online education." Another teacher did not want to get "too absorbed" and another felt that the "return on investment" for social interactions would not "justify the time spent." Teachers considered these forms of interaction as inconsequential with minimal benefit to the student. In a similar vein, Nippard and Murphy's (2007) qualitative analysis of twelve synchronous courses found that social interactions often drew attention away from the content delivery. Though not expressed overtly, compounded with the time factor, the distraction caused by social interactions may be one reason why EHS teachers tended to limit them.

Paradoxically, the absence of these very exchanges made it difficult for teachers to feel like

they knew their students. As Molly stated,

> There are times when I feel like I don't know the students. So unless they are good writers or they email me a lot, or you know, it is hard for me to, they're just kind of a name, and I don't like that. But the kids who are consistent in turning in the assignments, you get to know pretty well.

Students and teachers were able to establish a "co-presence" as Harms et al. (2006) described it through frequent interaction over the subject matter.

However, not all teachers felt like they could establish a connection with their students, "see their personalities," and have a "personal relationship" with them. Teachers struggled to find meaningful ways to build rapport with their students frequently contrasting the process of doing this online with how it generally occurred in the physical classroom. Brian articulated it well contrasting how physical and virtual relationships were established:

> Well the difference with them again is: I see them; I interact with them; I shake their hands; I know their name; I know their face. A lot of them I know their sad story behind some this. At EHS you just can't do any of that. It's nameless. It's faceless. Even though you can feel some of that in the interactions and the other end of that are the kids that are just really very, very bright moving forward in positive ways. And you kind of feel like I'm glad that there's this opportunity for you to get these credits and you can move on and do some of those things. I know very well there is a percentage of my EHS kids that are that type of kid just at a high-school level. But I don't have any way of creating that rapport or interaction with them at that level. I try to be sympathetic to the fact that some of these kids. I can tell by the way they write and the way that they express themselves that they probably academically struggled. I'm trying to save that.

Murphy and Rodriguez-Manzanares (2008) argued that online teachers need new strategies for building rapport and social presence in an online environment in the absence of the physical and visual cues. Furthermore, these interactions need to be intentionally planned and integrated into the learning. Murphy and Rodriguez-Manzanares (2008) assert that the contradictions teachers face in the online and physical classrooms can drive change and spark innovation in teacher practices. For EHS teachers, they felt the contradictions but continued to grapple with identifying and applying these new strategies to connect with their students.

There were several possible consequences resulting from the absence of a relationship be-

tween the student and teacher. For example, it may be easier for the student to disengage from the course if they do not feel connected to their teacher. Kristine expressed this consequence:

> I think it's way easier for a kid to fail out of a class if the teacher, if they haven't got a relationship with the teacher. They're like, "I don't know this person. It doesn't matter. I don't care if I fail." There's not this personal, like, "I don't want to hurt their feelings. I don't want to look bad." If they don't know the teacher, then they don't care about those things. So sometimes when you have that personal relationship with them it helps push them forward because they just have those internal motivations that they don't want to let them look bad or let someone down.

Similar to DiPietro et al.'s (2008) findings, a relationship that includes deadlines, encouragement, and continual teacher communication may be enough to keep students motivated.

The disconnection between students and teachers not only affects students' commitment to the course but may also strain the teachers' commitment to the course and to students as well. Brian hinted at this struggle:

> I don't know exactly how to word this. I care if they are passing. I care if they are understanding. But I don't know *them* to care. So it's not a personal caring. It's a generalized, "I hope you do well." And once in a while a student will, by the way they word things, you can just tell they struggle in general in school. And I kind of feel hopeful that they make it through and survive and accomplish those goals, but I don't actually put a face to anybody. They don't know me, and I don't know them. We're just connecting through a cyber space here.

Essentially, Brian indicated that EHS teachers cared for their students at an aggregate level but not at an individual level as they struggled to form these personal relationships. Similarly, teachers in Lai and Pratt's (2009) study also struggled to connect at an individual level with their students and at times felt they were "talking to a blank wall" (p. 14). This was the case even though these courses were taught synchronously using video-conferencing technologies.

Disconnection from the Traditional Notion of Teaching

In addition to feeling disconnected from the students, teachers felt disconnected from their role as a teacher. They felt "very removed" from the teaching experience as they traditionally viewed it. Some teachers viewed themselves primarily as graders since the "curriculum

is already set up." As one teacher stated, "I evaluate their work more than teach them. You know they are kind of on their own for learning and I just evaluate their learning, I guess." In contrast to the traditional classroom where teachers play all of the roles Ferdig et al. (2009) and Davis (2007, November) articulated, teachers felt fragmented and at a loss playing just the teacher or course facilitator role as opposed to the additional roles they played in the brick-and-mortar classroom. Consequently, they did not feel like a teacher in the sense that they were familiar with in their face-to-face classrooms. Carl articulated this difference in roles well:

> It is probably different than face-to-face because you are displaying the information right there with the student. And with EHS, it's already done on the computer system, and so a lot of the times the role you just get to grade the papers. And then just answer questions. But as far as like being, I almost want to say a mentor because you can see that student you can talk to them right then, it is definitely different that way. Almost like, here's professor's assistant. Here is a bunch of papers, and you just kind of grade it.

Brian felt that his teaching role was even more narrowly confined to that of a grader in contrast to the more holistic role of teacher, course facilitator, instructional designer, local key contact, mentor, technology coordinator, and guidance counselor that he played in his walled classroom (Ferdig et al., 2009). Again, looking to Ferdig et al.'s (2009) work on role definition, in a face-to-face classroom the teacher would play all eight roles whereas in an online classroom the teacher may only play one. This created a sense of role fragmentation for the teachers causing them to feel disconnected from their own profession as they knew it.

Another role teachers expressed was that of a navigational mentor "herding them along towards the finish line." Again teachers indicated that this role made them feel less like a teacher in the traditional sense. As Molly stated,

> It is hard because your first instinct is that I want to say I'm a teacher. But a lot of times I don't think I teach because of the curriculum is set up. And you know in face-to-face teaching you are on stage all the time and you are doing everything you can to get them to pay attention and you can see their faces and know what is happening. And you just don't get that online. It is hard to get a sense of the person behind the assignment unless they are good writers. There are a lot of kids, you know. If they are good writers you get a sense of their personality, and it is easier. But if they are not great writers, you don't get that voice in their writing and so it is hard to [pause]. You

> know, I don't feel like I am teaching them. I feel like I put it out there, and they have to be willing to put the time and effort into it and learn the material. And you know, I'm kind of removed from it. And I do think I try to mentor them, and I try to guide them through it, and if they have questions I can answer their questions.

Feeling removed from the act of stand-up teaching, the design of the instruction, and the physical presence of the students resulted in this teacher feeling less like a teacher and more like someone standing on the sidelines ready to offer support when asked. These indicators speak to the imbalance in teacher presence and social presence.

The constructs of teacher presence, social presence, and cognitive presence must be balanced for a community to develop and thrive (Garrison & Arbaugh, 2007). However, at EHS teachers felt like teaching was "just not the same" or "different" because community was lacking. Not only did teachers miss playing the more holistic role that they did in the traditional classroom, they recognized that the role of a teacher was much greater than the singular role they were experiencing as online teachers. As one teacher expressed,

> But I love teaching in the classroom. I love that one on one with students and there's something about seeing their face and their facial expression and being able to tell if they're having a bad day as well. Teaching isn't just teaching a subject, but it's teaching the students and helping them through their stress of daily life and teaching them compassion and I don't get to do that on EHS and that's something I miss a lot.

This teacher expressed that teaching was more than just connecting over content, but also included connecting with the student on issues outside of the classroom. Simply put, EHS teachers were frustrated by their inability to fulfill the traditional role of teacher as they had identified it in their brick-and-mortar environment.

Disconnection from Fellow Virtual Teachers

In addition to feeling disconnected from the students and the traditional role of teaching, teachers felt disconnected from other virtual teachers. At times, not only did the teachers feel the students were "on their own", but they felt that they were too. As Brian expressed, "At EHS, it's pretty much everybody is their own island." Despite monthly synchronous professional development training and an annual faculty meeting drawing in faculty from across the state, many teachers felt isolated and disconnected from their peers and practices. While some teachers felt that they could email their peers for help and assistance, others expressed feeling "alone" and that colleagues were less "accessible." The traditional forms of gathering best practices at a traditional school were more challenging in the online setting. Teachers experienced isolation as they struggled to learn from one another and to understand how their performance compared in relation to others.

As Molly said,

> Well the problem is we don't know how we are doing sometimes. I mean, you get a little thing from students or parents every once in a while. But I don't really know compared to other teachers what they are doing better than I am, or what they are not doing. And so you're kind of isolated in that you're not knowing sometimes how it is going.

Again, the absence of feedback from students, parents, and peers contributed to a sense of isolation and uncertainty in their performance as professionals. Teachers lacked a sense of community established by a balance of social presence, teacher presence, and cognitive presence.

Beyond not knowing how one was doing in relation to one's peers, some teachers felt like they did not have a way to gather best practices for online teaching. As Mark put it,

> One thing that I like about teaching in the classroom is I get to know faculty, and you get to bounce off a lot of ideas and things on them. And I don't notice that with EHS. I don't feel like I am necessarily a part. I just feel like this little individual who is doing their little thing. And we do have a faculty meeting once a year, but it is never really a time when you really get to know the faculty.

Again, the traditional means for sharing best practices as a profession did not work in the online setting. Consequently some teachers at EHS struggled to find thought partners to contribute to their professional development in meaningful ways. Similarly, in their report on professional development for virtual schools, Davis and Rose (2007) articulated that teachers cannot work in isolation but need ongoing support structures in the area of professional development and educational support.

Just as students were expected to initiate contact to receive attention and responsiveness (Hawkins, Barbour, & Graham, 2011), teachers were also supposed to initiate interactions with one another. The onus of engagement for teacher-to-teacher interaction was on the inquirer just as it was for the students. When asked what her expectations were for interaction with other virtual teachers, Kristine stated the following:

> I don't expect that we can be this face-to-face, touchy-feely-huggy group. [chuckle] It's not like we have lunch together like you would in a high school. You can't have that kind of an interaction. So given the constraints, I feel that we're very connected in terms that I don't have a problem emailing some of the other teachers and asking

> them how they're doing certain things. I don't feel like I can't do that. I just feel like, yeah, we're definitely on our own just as our students are. But anybody is only an email or phone call away.

What Kristine articulated was that the degree of interaction and its sufficiency was relative to the expectations one had for the community or group. Thus, if you joined a group with expectations that you would function as an independent body with interaction only when you initiated it, then teaching and studying at EHS worked well. However, if you expected your interactions to be initiated from both directions then EHS would feel like an "island."

Conclusions and Implications

This study relied on the framework of COI to investigate teacher roles in K-12 online learning. Until now, researched based on this framework has focused on adult learners. This study extends our knowledge of the COI framework exploring the lived experiences of teachers with adolescent learners in a virtual schooling environment. This research led to identification of the following issues. Absent or limited interaction, particularly social, contributed to teachers' sense of disconnection from their students. Teachers did not have the same sense of being professionals because of the limited role they played in the online classroom compared to the roles they assumed as classroom teachers. Just as teachers felt isolated from their students, the majority felt isolated from each other due to their perceived inability to establish a collaborative relationship with their colleagues. From the COI lens, teachers' limited interaction with their students and colleagues resulted in an imbalance of social and teacher presence. This limited interaction, coupled with teachers' limited sense of cognitive presence due to their limited role in the content creation, resulted in feelings of disconnection and a limited sense of community.

There are three main implications that EHS and its teachers should consider to address these issues. It is possible that the formal and perceived academic nature of EHS' LMS prevented or hindered social interactions between students and teachers and amongst students themselves. Barbour and Plough (2009) described one online program that used a closed social network to create a nonacademic space where students could socialize with each other and with their teachers. EHS should consider potential avenues to establish such a space either as an extension of the LMS or outside of it completely. Second, while the virtual school environment created a fragmentation of roles for the teacher, the EHS instructional model further limits the ability of their teachers to perform even the duties normally undertaken by virtual school teachers and course facilitators (Ferdig et al., 2009). EHS teachers should make a conscious effort to increase the quantity and frequency of content-based interactions with their students. This would allow teachers to have a greater instructional role (or both teacher and cognitive presence). Finally, EHS could create a space for a virtual staff room in the LMS where teachers could interact, share best practices, and discuss student issues.

There are four primary areas that researchers should consider for future investigation into the sense of disconnection in a virtual school environment. First, given the teachers' beliefs that the lack of interaction with their students had a detrimental effect on student performance and engagement, it would be worthwhile to determine if the students themselves shared this sentiment. This is an important avenue for future research because if students do not share these concerns, efforts toward instructional change should be focused elsewhere. Second, teacher roles in the online environment have become fragmented, and because of this fragmentation, teachers do not feel the same sense of professional identity as they do in the classroom. A potential line of inquiry would be to examine the student role in the online environment. This examination should focus upon both the potential and perceived changes students sense with being an online student, and whether those perceived changes have similar negative effects on their role in the instructional environment. Third, while the majority of teachers interviewed indicated that they felt disconnected from their online teaching colleagues, there was one teacher, Kristine, who felt otherwise. It would be interesting to determine which of these was the prevalent attitude with a larger sample of EHS teachers. This would allow EHS to undertake corrective measures if the majority opinion stayed consistent or focus their efforts elsewhere. Finally, while the EHS model has changed little since its original conception, EHS could consider adopting social media strategies to reduce the sense of isolation and increase engagement, connectivity, and community between students and teachers. Though not an immediate solution due to structural issues such as large class sizes, rolling enrollment, and the independent-study model EHS has adopted, it may be worthwhile to adopt and research if administrators are willing to make significant adjustments.

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