

Graduate Student Perceptions and Experiences with Connectivity in an Asynchronous, Online Distance Degree Program

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A challenge within higher education is that student retention is lower in online programs than in traditional programs partly due to a disconnection between students and the institution. An initial study conducted by the authors of this study confirmed that students in an online program desired connectivity. The research team sought participants from the original study to participate in a consensual qualitative research study. Results indicated that students desired high connectivity with advisors, instructors, and the program and some connectivity to their peers. The leading factor that contributed to their feelings of connectedness was ongoing and timely communication.

INTRODUCTION

The number of students enrolled in online, distance degree programs continues to rise in colleges and universities in the United States. This national trend is inclusive of special education teacher certification programs in order to increase accessibility for qualified candidates, especially in rural areas. This growth is largely in response to the shortage of special education teachers in this country. However, retaining students enrolled in these online, distance degree programs is challenging. In an effort to retain students, connectivity must be explored.

Teacher Shortage and Distance Degree Programs

The national shortage of highly qualified special education teachers has persisted for decades. Nationwide, 98% of school districts are reporting a shortage, and it is expected to get worse. By 2020, the Bureau of Labor Statistics reported the gap will have increased by 17% (National Coalition on Personnel Shortages in Special Education and Related Services, 2016). In response to teacher shortages around the country, the number of virtual personnel preparation programs has grown dramatically over the past few years (Allen & Seaman, 2008), especially in the area of special education (Johnson, Humphrey, & Allred, 2009). According to Canter, Voytecki, and Rodriguez (2007), providing online special education teacher certification programs offers effective instruction and increases the ability for rural schools to offer special education services to their students.

Retention and Connectivity

Despite the continual growth of distance education programs, a significant challenge for higher education institutions is that student retention in online programs is lower than in traditional ones (DiRamio & Wolverson, 2006; Hoyer, 2006; Stanford-Bowers, 2008; Terry, 2007). This dropout rate is one of the greatest challenges facing online educators and administrators (Lee & Choi, 2011). Literature suggests there are a number of reasons for low retention among students taking coursework online. These include, but are not limited to, lack of institutional support, lack of connection between the student and the institution, quality of interaction between the student and faculty, sense of isolation, disconnection, issues with technology, and student self-discipline (Heyman, 2010; Stanford-Bowers, 2008; Veenstra, 2009).

While there are barriers to online student retention, there are students who persist in distance degree programs. Studies have suggested that faculty-student interaction is correlated with dropout rates. To illustrate, Ivoankova and Stick (2007) found that students were more likely to persist if faculty gave timely feedback, involved students in interactivity activities, and promptly provided supports to struggling students. When Thompson, Miller, and Franz (2013) examined the learning experiences of undergraduate students who failed the online version of a course, then passed when completed it face-to-face, their findings confirmed the importance of establishing a teaching presence and cultivating social presence among students to support success. Lastly, Carr (2000) and Rovai (2002) suggested that students who take online courses experience a lack of connectivity with their instructors, peers, and the program because they do not have a physical presence.

Schwartz and Holloway (2012) reported that one might assume student-faculty relationships are not valued in graduate education due to the short length of a master's program and the increased focus on careers. However, they investigated the relationship between faculty and master's seeking students and found these connections were forces for growth and forward movement. Students felt energized by their connections, had boosts in self-esteem, increased their knowledge, improved their ability to take action, and desired more connection.

Schroeder, Baker, Terras, Mahar, and Chiasson (2016), conducted initial research to ascertain connectivity students desired and actually experienced within their asynchronous, online Master's of Science in special education program. For the 100 students who participated in the study, researchers investigated their connectivity with other students, their instructors, their advisors, and the online program. Results suggested students desired high connectivity overall but wanted the highest connectivity with their advisors and the least connectivity with other students. There was a variation between participants' ages and those who wanted connectivity with peers, advisors, instructors, and the program. Students between 26 and 30 years of age desired high connectivity with other students and their instructors. Conversely, students between 46 and 50 years of age desired the least amount of connectivity with students and instructors. All students experienced high or very high connectivity with other students, their instructors, advisors, and program. The greatest level of experienced connectivity was between the student and his or her advisor.

Research on the effectiveness of online learning has largely focused on the instructional process relative to meeting course objectives, which typically is measured through the acquisition of knowledge

and skills. Yet, the online learning experience is more expansive and includes relational elements, such as connectivity. To date, there is limited empirical evidence on the degree of connectivity learners feel toward others in their learning communities, especially in distance degree programs.

In the initial quantitative study described above, students desired and experienced high connectivity to the program, their advisors, and their instructors, while at the same time, they reported experiencing and wanting less connectivity to fellow students. In turn, this current study further investigated the concrete perceptions and experiences of connectivity for these graduate students enrolled in this distance degree program using asynchronous, online instruction. Specifically, the perceptions and experiences were focused on connectivity with advisors, instructors, students, and with the online program as a whole.

METHOD

An applied, qualitative design provided a vivid and full description in the natural language of the phenomenon under study. Hill, Thompson, and William's (1997) *A Guide to Conducting Consensual Qualitative Research* (CQR) provided the framework. CQR uses open-ended questions to collect data, utilizes an inductive analytic process, uses teams to make decisions by consensus, and verifies the stability of results.

In the initial, quantitative study described above, students desired and experienced high connectivity to the program, their advisors, and their instructors, while at the same time, they reported experiencing and wanting less connectivity to fellow students. In turn, this study further investigated the concrete perceptions and experiences of connectivity for these graduate students enrolled in this distance degree program using asynchronous, online instruction. Specifically, the perceptions and experiences were focused on connectivity with advisors, instructors, students, and with the online program as a whole. Recommendations for increasing connectivity were also ascertained.

Setting

The study took place at a university of almost 15,000 students located in a rural state. Within the university's nine schools and colleges, 225 fields of study were offered at the undergraduate and graduate levels. The University had been offering online courses for 15 years, and as of Fall 2016 offered 16 online degrees (10 graduate and 6 undergraduate) and nine online, graduate certificate programs that were fully online with no on-campus requirements.

The study was situated in a college of education and human development's Department of Teaching Learning. This department is comprised of seven programs, one of them being special education. The special education program was selected for this study because it offered a fully online Master's of Science degree using asynchronous instruction, with no on-campus residency requirement. Enrollment was approximately 325 graduate students. Since the program began offering online learning in 2007, students have resided across 42 states and eight countries.

Participants

During the initial study, participants were asked to provide their name and primary mode of contact if they were willing to participate in an interview for a follow-up, qualitative study. A total of 42 participants provided contact information.

After the project's approval by the Institutional Review Board, participants were contacted via email. Those who responded were electronically sent the consent form detailing the study. After written consent was received, participants were assigned to members of the research team for an interview to be scheduled. Twelve students participated in the study. CQR recommends 8 to 15 participants, which is small enough to study intensively, yet large enough to determine if findings apply to several participants or are just representative of one or two.

As can be seen in Table 1, the 12 participants ranged in age from 25 to 61 with a mean of 35.9 and median of 32. Most participants chose this distance degree program for its convenience and flexibility. At the time of the study, four participants had just completed their master's degree, while the remaining eight

had a range of 24 to 45 earned graduate credits. A minimum of 32 credits was needed to graduate. The average GPA was 3.9. Over half (n = 8) of the participants had physically been on-campus at least once for varying reasons.

TABLE 1
PARTICIPANT INFORMATION

| | |
|------------------------------|--|
| Age | Range: 25 to 61 Mean: 35.9 Median: 32 |
| Why Selected Distance Degree | Convenience (n = 5) Flexibility (n = 5) Recommendation (n = 2) Nationally Ranked (n = 1) Undergraduate Studies (n = 1) |
| Graduate Credits Earned | Completed Degree (n = 4) 24 to 45 credits |
| Distance from University | Range: 5 to 1515 miles Mean: 343 miles |
| Physically Been On-Campus | 8 Participants |
| GPA | Mean: 3.9 Mode: 4.0 |

Data Collection

Data were collected across one semester by conducting one semi-structured interview with each of the 12 participants. Interviews were divided amongst researchers resulting in a one-on-one pairing. Each interview was approximately one hour and was conducted by phone or video conferencing. Interviews were audio recorded for transcription, and member checking was used for validation. Each participant was mailed a \$25 Visa gift card following member checking. Individual interview transcripts were assigned a code number (e.g., P1) to protect participants' confidentiality.

Because interviews were conducted across the five member research team, a semi-structured interview guide was developed for consistency. Findings from the authors' initial study on the degree of connectivity in online courses was the framework for developing the interview guide. This guide consisted of 22 open-ended questions in order to not constrain the responses of the participants. The questions were categorized into five sections: (1) participant information; (2) connectivity with advisors; (3) connectivity with instructors; (4) connectivity with students; and (5) connectivity with the program. The Appendix contains the questions for each section.

To assist with usefulness, clarity, and sensitivity of the interview questions, the guide was audited by one participant-consultant prior to conducting the interviews. All recommendations made by this individual were accepted.

Data Analysis

At the outset of the study, potential researcher bias was discussed to help researchers set aside any preconceived experiences about connectivity and distance degree programs. Each researcher was asked to

respond to the following statement in writing: In order to produce a valid body of research, please identify any values, biases, or experiences about this topic that could influence how you collect, analyze, or report data. Responses were shared and discussed amongst researchers. In the consensual discussions that ensued, researchers held each other accountable for potential bias.

To understand this natural phenomenon, data were inductively analyzed using consensual qualitative research (CQR) designed by Hill, Thompson, and Williams (1997). This process relies on two teams, the core team and the audit team. This method permits the core team to rigorously and systematically analyze data in an effort to reach consensus, then relies on the audit team to check all analyses. The core team was specifically charged with identifying core ideas for participants' experiences through analysis of each participant's statement, then for discovering patterns within these core ideas that accurately represent the sample. The audit team's role was to audit these ideas and patterns for stability. In CQR, the core team initially analyzes the majority of the transcripts, while the audit team analyzes a small sample to determine stability of findings. In this study, the core team initially analyzed 10 transcripts and the audit team the remaining two. Four themes emerged from the data and three conclusions were drawn; an analytic schema is presented in Table 2.

TABLE 2
ANALYTIC SCHEMA

| Themes |
|--|
| <p><i>Desired Connectivity</i></p> <ul style="list-style-type: none"> • Theme 1: A majority of participants did not experience any change in their desired connectivity to advisors, instructors, students, and program, but for those who did, they experienced greater connectivity than desired, especially with advisors. • Theme 2: Participants desired high to very high connectivity to their advisors, instructors, and the program; whereas no participant desired this degree of connectivity with other students. <p><i>Connecting Experiences</i></p> <ul style="list-style-type: none"> • Theme 3: The central experience that made most participants feel connected was quality communication; consequently, they felt part of the distance degree program. <p><i>Disconnecting Experiences</i></p> <ul style="list-style-type: none"> • Theme 4: Most participants did not have a disconnecting experience with advisors nor the program. However, slightly less than half of the participants had delayed feedback from instructors, and half experienced limited interaction from other students, which impacted their connectivity. |
| Conclusions |
| <ol style="list-style-type: none"> 1. Participants enrolled in this distance degree program desired <i>high</i> to <i>very high</i> connectivity with advisors, instructors, and to the program as a whole. 2. Participant wanted <i>some</i> connectivity with other students. 3. Quality communication was the leading factor in participants feeling connected or disconnected in this distance degree program. Communication must be ongoing, timely, and utilize a variety of modes. |

RESULTS

Upon completion of data analysis, four themes emerged. Below, each theme is presented along with supporting evidence.

Theme 1

A majority of participants did not experience any change in their desired connectivity to advisors (58%), instructors (83%), students (58%), and program (83%), but for those who did, they experienced

greater connectivity than initially desired, especially with advisors. Participants were asked to rate their desired connectivity, with advisors, instructors, students, and the special education program as a whole. They rated the desired connectivity on a scale of 1 to 5: no connectivity (1); limited connectivity (2); some connectivity (3); high connectivity (4); very high connectivity (5). Connectivity ratings were given for students' desired connectivity when first starting graduate school and how it may or may not have changed over time. When participants began their fully online program, many revealed being "nervous," or not sure what they were "getting into." One admitted to wanting some "hand holding" and another wanted to "really get to know" the people teaching her. Consequently, they initially desired *high to very high* connectivity with advisors and instructors, yet as they progressed through the program and became more "comfortable and confident," this desire for connectivity did not change for most participants. This may have been a result of participants (n = 10) feeling well supported, especially by their advisors. One participant shared how she "likes talking" to her advisor and felt they had a "pretty good relationship." Another came to understand the importance of being connected to her advisor in order to get things accomplished. Most participants found the majority of instructors to be communicable and understanding, with one sharing, "...I found that I did feel more connected to them I guess whether I wanted to or not."

Most participants (n = 10) desired connectivity to the special education program did not change over time. Seven of these participants wanted *high to very high* connectivity, and the remaining three wanted *some*. One participant asserted how she "never felt like I was just another student with the professors." Another shared:

Because I hadn't taken any special ed coursework at all. I just had like my teaching license and so special ed was a bit of a deep end for me to jump into. I'm going to stick with a 5. This is a hard job and there are people out there who have been doing it for 15 years and if they can help me with something and if they have any advice that they can spread some of that wisdom around. I think that is good so I'm sticking with 5.

Theme 2

Participants desired high to very high connectivity to their advisors, instructors, and the program; whereas no participant desired this degree of connectivity with other students. When participants first began graduate school, none of the 12 wanted *high to very high* connectivity with other students. This is a stark contrast to the connectivity they wanted with advisors, instructors, and the online program. Nine participants wanted *some* connectivity, and three wanted *low to very low*. One participant explained, "I was expecting fully online. Hey great, I won't have to interact with a room full of strange people. That was just fine with me." Another explained how she was more focused on having a connection with colleagues at work than with peers in class. Working full-time and having children did not leave time for connectivity with peers for another participant. Over time, only three wanted more connectivity.

The connectivity participants did desire from other students was more for learning purposes rather than for socialization. The connecting experiences participants had with other students were driven by course-based activities such as completing discussion boards, blogs, wikis, and group work. These activities helped participants learn about their peers' experiences and their perspectives, which enhanced learning. Conversely, participants also experienced disconnection from peers. This was primarily due to disengagement from other students during the course-based activities and from courses that had limited opportunities for interaction.

Theme 3

The central experience that made most participants feel connected was quality communication; consequently, they felt part of the distance degree program. Quality communication was defined by participants as the following: variety of modes (not just email), prompt, and ongoing. The preferred mode of communication was a phone call.

Specific to advisors, eight participants experienced quality communication. The impact was that they felt calm and comforted about the special education program because they were able to understand it. One

participant shared, “I just knew I could trust her and she would have my back.” Participants noted how having “somebody” to whom they could direct their questions was essential for connectivity:

I should be able to figure this out. I shouldn't need all this handholding. But she evidently understands that students don't always know exactly how the program works and how things flow and she was very good at initiating emails and making sure that we understood that we could contact her and had a nice way of emailing that made me feel like I could talk to her about whatever. I never felt like I was bothering her or that she would think that I was an idiot I guess.

Beyond this, four participants highlighted how influential that initial contact with the advisor was to them, especially when it was initiated by the advisor and was positive. Two participants even felt cared about, stating: “I really felt like she cared even though she had never met me....” In addition:

It makes me feel like she really cares about the students and about the graduate program. I think if other than me feeling like I'm a part of the school even though I'm not physically there, it does make me feel like a student even though I'm just an online student.

Unfortunately, two participants had no experiences with their advisors, which manifested as no connection.

As for participants experiencing connectivity with instructors, no pattern emerged; however, participants experienced diverse interactions that made them feel connected. The leading pattern that emerged was that participants experienced connectivity when instructors shared personal information. This was operationalized as sharing personal experiences about the field and providing their professional backgrounds. Connectivity was expanded because this type of sharing let participants know instructors had “been in my shoes.” This opened the door for participants to share personal experiences, too. They also appreciated when instructors participated in discussion boards and hosted live chats. Lastly, the use of audio and video were welcomed practices. Participants liked seeing and hearing instructors for lectures, demonstrations, and virtual office hours, as they “felt part of the class.” One participant noted, “They have those office hours which was fabulous. It was really nice, like I could actually see who my teacher is and we could actually talk. This was kind of cool.”

When analyzing connecting experiences to the program as a whole, no patterns emerged. This does not, however, imply that students were not connected; they just had differentiated experiences. Three participants asserted how they felt connected to the program simply because it was set-up well. Friendly and helpful office staff were denoted, as were the classes and instructors.

Theme 4

Most participants did not have a disconnecting experience with advisors nor the program. However, slightly less than half of the participants had delayed feedback from instructors, and half experienced limited interaction from other students, which impacted their connectivity.

Eight participants did not have a disconnecting experience with their advisors. Interestingly, a few of these participants suggested that simply being an online student can be disconnecting, stating, “It's just a natural disconnect from face-to-face.”

Nine participants had disconnecting experiences with instructors. Six of these experienced delayed feedback. This is the negative correlate to the quality communication participants must experience to feel connected. Delayed feedback was operationalized as delays in grading and questions not answered in a timely manner. Here is one participant's illustration:

I had one class where there was no interaction with the professor whatsoever. The whole piece was really frustrating. I found myself asking, ‘Is there even an instructor behind this or is it just put out?’ Assignments weren't graded. About every 3 weeks it was like oh, she logged in and graded. So there was no feedback throughout the course at all. It really didn't encourage me to do much of anything in the class. It was really like a free pass to kind of skate through. Which in turn frustrated me because I paid a lot of money for the classes and I want to get the most out of it, but it just was disheartening and it made the

content seem unimportant when it could have been a really, really important class....even how the course was laid out, it felt like there wasn't much thought put behind the weekly assignments and there wasn't much meat to it and there was no interaction from the professor.

One of these students felt instructors should be "communicating with students if a delay in grading, so I know instructors are working equally hard." Besides delayed feedback, other participants encountered instructors who lacked the personal effect. No "face time" only email [no video or audio was used], no personal information was shared, and little contact overall were the central experiences for this. Participants described the impact of this as: "kind of weird," "a little cold," and not feeling "part of the community."

Six participants encountered disconnecting experiences with other students. Two participants commented on how there was no opportunity for interaction in some courses:

A couple of classes where there just really was no message board interactions. It really was just read this chapter, write this paper, alright on to next week. Read this, watch this video, turn this paper in. I don't know if there was anybody else in the class actually.

Comparatively, in courses that had interactive activities embedded, two different participants noted a negative impact when students did not participate, citing "feeling disconnected" and "did not get to know those students."

Eight participants did not have a disconnecting experience with the special education program as a whole. One participant summarized, "I never really felt disconnected from the program. Even being online, I just never did. That was my program and that was what I was going to do, and I was good with it." Amongst the four who had disconnecting experiences there was no pattern. However, two participants were concerned with the amount of required courses compared to elective ones.

Summary

Participants enrolled in this distance degree program desired connectivity. They mostly desired it with their advisors, instructors, and online program. Connectivity with other students was least desired, yet participants still wanted to have *some*. Also notable was the impact that quality communication had on participants feeling connected or disconnected when enrolled in a program that is entirely online. Communication must be ongoing, prompt, and utilize a variety of modes.

DISCUSSION AND IMPLICATIONS

This follow-up study investigated the concrete perceptions and experiences of connectivity for graduate students enrolled in a distance degree program using asynchronous, online instruction. Specifically, their perceptions and experiences focused on connectivity with advisors, instructors, students, and with the online program as a whole. Three conclusions were drawn.

Conclusion 1

Participants enrolled in this distance degree program desired *high to very high* connectivity with advisors, instructors, and to the program as a whole, whereas none desired this degree of connectivity with other students. Participants revealed that the greatest level of connectivity was experienced between them and their advisors. Other research corroborates this finding as one study found that academic advising was vital to a student's success within any program of study, affecting both student retention and student satisfaction (Corts et al., 2000). A more recent study stated adult graduate learners needed their advisors to provide good programmatic guidance they could trust, to care about them as individuals, and to remain readily available with timely responses (Schroeder & Terras, 2015). The participants in the current study identified similar essential characteristics, such as timely communicative responses and guidance.

While previous research supports the notion that students desire connectivity with advisors, and have better retention when there is high connectivity, studies validate that students also need an involved

instructor. Woods and Baker (2004) found that a “sufficient level of interaction with faculty generally creates a sense of personalization and customization of learning and helps students overcome feelings of remoteness; perhaps the greatest obstacle to fostering a student’s sense of community in online distance learning” (p. 6). In another study, Reupert, Mayberry, Patrick, and Chittleborough (2009), stated that students needed online instructors to provide a personal presence by being engaging, approachable, understanding, patient, and passionate about the subject. Accordingly, they purported these qualities were enacted through specific teaching strategies including self-disclosure, relationship building, humor, provisions of individualized and timely feedback, and organization. Comparatively, findings from this current study support these assertions. Participants felt connected when advisors and instructors initiated and responded through a variety of modes of communication, because being able to talk to *somebody* made students feel faculty’s presence. Participants also felt cared about through personal information shared during formal and informal dialogue.

Much like research on traditional, face-to-face teaching, participants in this online program also implied that it is the connective experiences with their advisors and instructors that link students to their institution of higher education and their academic programs. In an effort to retain students in online special education programs, the advisors and instructors must form relationships with their students in an effort to create levels of connectivity that have traditionally been desired among on-campus learners.

Conclusion 2

Participants desired *some* connectivity with other students. Although participants wanted connectivity with their peers, having an increased connection with their advisors and instructors was more important for the aforementioned reasons. Findings from the initial, quantitative study revealed that only 12% of students wanted *high to very high* connectivity with their peers. Similar to the initial study, students were more concerned with establishing and maintaining a sense of connection to their academic advisors first, their instructors second, their online program third, and their fellow students last.

Many students desired lower connectivity with peers. This phenomenon can be explained by a study conducted by Capdeferro and Romero (2012) who investigated online master’s students’ perceptions of collaborative learning activities. Students identified these activities as the most important source of frustration in online learning due to the following: group disorganization, lack of shared goals amongst team members, imbalance in level of commitment and quality of individual contributions, excess time spent on these tasks, and difficulties in communication. Empirically supported, not all students want a social connection with their instructors and classmates (Drouin & Vartanian, 2010), rather the *flexibility* of online learning is paramount (Reupert et al., 2009). Reupert et al.’s finding is corroborated with the current study as the majority of participants selected the online, distance degree program because of its flexibility and convenience. However, this cannot be generalized to all students. Müller’s (2008) study found that students ranked high in importance the relations they built with online classmates because building social relationships with peers provided a key support system for them. Müller’s findings are reinforced by Mykota and Duncan (2007) which found students are able to develop a sense of connection to others if they experience belonging and a sense of being part of the online experience.

Participants’ pursuit for a graduate degree, in order to advance their professional careers, would explain their reduced connectivity with other students, but increased connectivity with advisors, instructors, and the program. Participants enrolled in this online program to attain a graduate degree for career advancement; advisors and instructors were their primary pathways for meeting this goal. Similarly, Ivankova and Stick (2007) postulated that graduate students are motivated for goal attainment and valued the career and financial outcomes of their education. This current study should not imply that participants do not want a connection with their peers, rather connectivity with peers may be pursued more in the workplace than in the college classroom, as all participants in this study were practicing professionals.

Conclusion 3

Quality communication was the leading factor in participants feeling connected or disconnected in this distance degree program. Quality communication was operationalized as ongoing, timely, and utilizing a variety of modes. Without these variables, disconnection ensued, especially when feedback to participants was delayed. Müller (2008) found that instructors' [and advisors'] availability (through email, telephone, or online chat), timeliness of their replies, and words of encouragement were viewed as critical to students' academic success.

The impact of quality communication is that participants in this current study understood the program, resulting in feelings of calmness and comfort. Numerous studies have suggested a positive correlation between relationally supportive online environments and cognitive learning (e.g., Baker, 2010; Gunawardena, 1995; Rovai, 2002). Another impact was that most participants in this study had connecting experiences, which were provocations for desiring *high* to *very high* connectivity with advisors, instructors, and the program. This supports a major finding from the initial, quantitative study that concluded all participants experienced *high* to *very high* connectivity. Pigliapoco and Boglio (2008) found that students' perceived sense of community in online courses was relevant to student satisfaction, performance, and persistence. Fundamentally, it was theorized that if students feel involved and develop relationships with other members of the learning community their levels of satisfaction and persistence increase (Tinto, 1993; Rovai, 2002). When examining these supportive and relational elements, they may have contributed to participants' average GPA of 3.9, especially when considering how GPA is significantly predictive of student persistence (Harrell & Bower, 2011). Woods and Baker (2004) postulated that failure to fully consider the relational dynamic in the online setting may produce greater feelings of isolation among distance learners, reduced levels of student satisfaction, poor academic performance, and increased attrition.

Findings from this current study provide evidence that quality communication with students is paramount for connectivity, which can have a direct effect on retention. Although online learning is expanding in availability and popularity, the high dropout rate remains one of the greatest challenges facing online educators and administrators (Lee & Choi, 2010). Ivankova and Stick (2007) had a parallel finding in that if faculty gave timely and appropriate feedback, involved students in interactive activities, and promptly provided supports to struggling students, then students are more likely to persist in online courses, whereas ineffective communication is a barrier to persistence (Aragon & Johnson, 2008). Because this study was situated in a graduate, special education program, retention of students is vital in order to help reduce the national shortage of qualified special education teachers.

Implications for Practice

Graduate students enrolled in an asynchronous, online distance degree program desire a strong connection with advisors and instructors throughout their entire program. The findings from this study provide guidance for how faculty in these special education programs can build connectivity with their students, while increasing retention rates, as an increasing number of students are relying on online programs to complete degrees. Retention of students in these special education programs is imperative due to the pervasive shortage of special education teachers. If we are to successfully address these critical shortages with qualified personnel, faculty must create relationships with their students in an effort to create levels of connectivity that have traditionally been desired among on-campus learners.

There is a clear indication from these findings that it is more valuable to focus primarily on students' connectivity with advisors and instructors over connectivity with their peers. Findings illuminated how the high level of connectivity students desire with their advisors and instructors ultimately connects them to their online program and institution. However, this should not imply that efforts should not be made to establish connectivity amongst peers, it is just secondary to instructors and advisors.

Establishing and maintaining quality communication is paramount. As discussed previously, communication that is timely, ongoing, and varied are how this can be achieved. Timeliness is attained when faculty respond to students within 24 hours. Students want ongoing communication that is reciprocal; meaning, they want faculty to initiate communication (not only respond) by sending a

“checking-in” email and sending a whole group email that updates students on course developments and professional activities (e.g., conferences attended). Additionally, diversify the mode of communication. Email is efficient, yet not always effective. Students want faculty to initiate phone calls, especially at the beginning of their programs. Lastly, students want to “see” faculty through video. Specifically, they appreciate lectures that allow them to see instructors talking and virtual office hours when faculty are live via the webcam. Effectually, students find these aforementioned practices relational, which makes them feel part of something bigger and makes them try harder. Both of these are essential for retention.

It was recommended by participants in this study that students need to also be accountable for connecting with faculty and other students. It was suggested that students need to reach out to discuss things if they feel disconnected. Beyond this, students need to work harder to connect personally than they had to in face-to-face classes due to not having that initial, visual attraction.

It is recommended that instructors and advisors in asynchronous, online distance degree programs be purposeful in mentoring each other on connectivity with students, especially new faculty. It may be helpful to develop guidelines with specific suggestions about connecting with students.

Future research from other disciplines might provide varying views regarding connectivity with instructors, advisors, students, and their programs. Research should explore students' connectivity to determine if these findings are true between and among disciplines, universities, departments and/or online and face-to-face environments.

In closing, here is a quote from a participant that captures the essence of connectivity and the study as a whole:

I had great instructors. Every one of them. I did not have any instructors that I felt didn't care and wasn't there to make my learning experience a good one. I felt connected to them through e-mails and video chatting. I'm an older student where I kind of like to put a little bit of personal stuff in with my learning and then I think that my instructors gave that back, too. They felt like they could share anything with me and so it connected us that way on personal experiences and I think that is important to be able to connect on a personal level.

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APPENDIX

Interview Guide

Section 1. Participant Information

1. Age
2. Why did you choose the online special education program for your graduate degree?
3. How many credits have you completed in your graduate program?
4. What is your geographic distance from the university?
5. Have you ever been on campus? Reason? How Long?
6. What is your GPA?

Section 2. Connectivity with Advisors

1. On a scale of 1-5 (1 very low, 3 some, 5 very high) how much connectivity did you want to have with your advisor when you first started graduate school? Has it changed?
2. If any, what experiences made you feel connected to your advisor?
 - a. What impact have they had on you?
3. If any, what experiences made you feel disconnected?
 - a. What impact have they had on you?
4. What recommendations do you give to develop strong connectivity between students and advisors?

Section 3. Connectivity with Instructors

1. On a scale of 1-5 (1 very low, 3 some, 5 very high) how much connectivity did you want to have with your instructors when you first started graduate school? Has it changed?
2. If any, what experiences made you feel connected to your instructors?
 - a. What impact have they had on you?
3. If any, what experiences made you feel disconnected?
 - a. What impact have they had on you?
4. What recommendations do you give to develop strong connectivity between students and instructors?

Section 4. Connectivity with Students

1. On a scale of 1-5 (1 very low, 3 some, 5 very high) how much connectivity did you want to have with other students when you first started graduate school? Has it changed?
2. If any, what experiences made you feel connected to other students?
 - a. What impact have they had on you?
3. If any, what experiences made you feel disconnected?
 - a. What impact have they had on you?
4. What recommendations do you give to develop strong connectivity with other students?

Section 5. Connectivity with the Special Education Program

1. On a scale of 1-5 (1 very low, 3 some, 5 very high) how much connectivity did you want to have with the special education program when you first started graduate school? Has it changed?
2. If any, what experiences made you feel connected to the program?
 - a. What impact have they had on you?
3. If any, what experiences made you feel disconnected?
 - a. What impact have they had on you?
4. What recommendations do you give to develop strong connectivity between students and the program?