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Synchronous Online Instruction, Institutional Connectedness, and Retention in College Students

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by
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Abstract

This study utilized items in a campus life survey, administered during COVID-19, to explore relationships among synchronous instruction, institutional connectedness, and retention. Various statistical tests were applied to the data set to analyze relationships between variables. The study showed no relationship between synchronous instruction and retention, and also no relationship between synchronous instruction and institutional connectedness. However, this study did align with earlier research, demonstrating a significant relationship between institutional connectedness and retention. The study also revealed a significant relationship between retention and two key demographics, male gender and advanced standing. Additionally, the study demonstrated a significant relationship between institutional connectedness and two key demographics, athletic involvement and transfer status. This study concluded that while synchronous online instruction is not a reliable strategy for increased institutional connectedness or retention, there is a clear relationship between connectedness and retention for traditional, campus-based students. The study also concluded that some demographics (gender, year in school, athletic participation, and transfer status) correlate with institutional connectedness and retention in ways that warrant further investigation.

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Chapter I: Introduction

Introduction

Times are tough for higher education institutions. The number of students completing high school is in a slump due to a slow birthrate in the early 2000s, and it is expected to continue for several years (Copley & Douthett, 2020; Education Dive Team, 2020; National Student Clearinghouse Research Center, 2019). The price tag on a college education in the United States continues to rise despite public complaints, and institutions face diminishing financial support from the government (Education Dive Team, 2020). Sinking enrollment over the past several years has challenged universities to think creatively in an effort to attract and retain students; the competition for enrollment is fierce.

Higher education enrollment trends.

With a slowdown in the enrollment rate for traditional college-aged students and an urgent need to recover income from declining revenue (Morris, Ivanchea, Coop, Mogliacci, & Swinnerton, 2020), many institutions have turned to flexible program formats in an attempt to attract adult and non-traditional students and boost enrollment. Designed to extend flexibility to students who might not otherwise enroll in a traditional college setting, the front-running formats are competency-based education and online education. In online education, students engage in learning activities and interactions with others in the course through the use of a computer and the Internet. Competency-based education, on the other hand, is a model of education that focuses on helping students accomplish course goals (knowledge and skills) according to their own timeline rather than seat time and instructor-led pacing. This can include the online modality, but it may also involve on-campus activities (Competency Based Education, n.d.).

Competency-based programs are intended to meet students' learning needs more efficiently and at a lower cost, and the model can be extended to K-12 schools as well as post-secondary institutions (Competency-Based Learning or Personalized Learning, n.d.). These programs are challenging to launch due to accreditation regulation, and the growth of this format has been slow (Fain, 2019); in the meantime, online learning continues to boom (Koksal, 2020) as institutions race to create new online programs and convert existing, face-to-face programs to the online space.

While enrollment in higher education overall continues to decline at an unsettling pace, enrollment in the online education sector continues to grow, especially in comparison with its face-to-face counterpart. Growth rates in higher education distance programming showed a predictable plateau for the first time in 2014, though the enrollments continued to grow beyond that point. In their 2017 report about growth and trends in online education, Allen and Seaman noted that while this may appear at first to indicate that distance learning is decreasing in popularity, the plateau is a plateau of growth rate rather than enrollment. It is helpful to note that the growth rate slowdown is likely impacted by the steep decline in higher education growth rates overall and that the rate of growth in distance education still far outweighs growth rates in higher education overall (Allen & Seaman, 2015, 2017).

Importance of retention in online education.

Given the stable growth in online education, the number of institutional leaders that are considering online education as critical to their long-term strategy has reached its highest level ever (Allen & Seaman, 2015, 2017). However, this strategy is not without its own challenges. Because the overall enrollment rate for higher education institutions continues to decline and competition for students climbs, it is critical for all institutions to make every attempt at retaining

the students who do enroll. Online programs struggle significantly more than their face-to-face counterparts with retention, sometimes losing between 40%-80% of their students (Bawa, 2016).

This is a problem for students and online programs, and it is a cause for public concern. Students who complete college degrees experience success in life significantly more than those who do not (Leonhardt, 2015; Leonhardt & Chinoy, 2019), and for non-traditional students who may have struggled with success in the traditional classroom to begin with (including those from low-income or diverse backgrounds), completion is critical in the online setting (Leonhardt, 2015). While student impact is most important, attrition also impacts institutions. In any program modality, high attrition rates decrease the stability of revenue institutions receive from tuition. In institutions that are already struggling financially, this is an urgent issue. Retention is a critical issue for students and institutions alike, particularly in online programs.

Retention and social connectedness.

Long before online programs were introduced, Tinto's 1975 work in retention laid the foundation for understanding a foundational relationship between retention and students' ability to feel connected with one another. Tinto suggested that although academic progress is the most influential factor in student retention, social integration also has an important role to play in a student's degree fulfillment. He defined social integration as "informal peer group associations, semi-formal extracurricular activities, and interaction with faculty and administrative personnel within the college" (Tinto, 1975, p. 107).

Building upon this pivotal work, later studies on the relationship between a sense of belonging and student retention have been frequently documented in the literature (Chen & Zhou, 2019; Cheng, 2004; Cooper, 2009; Fischer, 2007; Masika & Jones, 2016; O'Keeffe, 2013). Studies have underscored that students with a strong sense of belonging in campus life

are more successful and have higher levels of retention, making student connectedness an essential institutional strategy for those who are at risk of completion (Chen & Zhou, 2019; Fischer, 2007; O'Keeffe, 2013).

Strategies recommended for the development of social connections include a wide variety of interactive approaches. One strategic area to the development of social connections for students includes ensuring that students have clear guidelines for interactions with one another, and that those guidelines ensure that their contributions to group work are high quality. This includes prompts for discussion boards to ensure constructive and deep discussion (Kim, Kwon, & Cho, 2011; Rovai, 2001; Skinner, 2007; Vonderwell, Liang, & Alderman, 2007) as well as clear structures for collaborative projects (Oliviera, Tinoca, & Pereira, 2011). The other major category of strategies focused less on providing guidelines for students and more on creating space for in-the-moment, flexible interactions among students and the instructor. These strategies help students perceive the instructor as a "real" person and set the tone for student interactions with others. Strategies include instructor participation in discussion boards (Rovai, 2002) as well as live interactions between students and the instructor that showcase an appropriate communication tone for the course (Skraamstad, Schlosser, & Orellana, 2012), demonstrate the instructor's availability and concern for students (Savery, 2010; Skinner, 2009), and allow students to get to know the instructor on a personal level (Hughes, 2009).

Retention and institutional connectedness.

While social connections are important for student retention, there may be more to the challenge. Experts speculate that some issues (such as retention and student satisfaction) could be due in part to the students' perceived lack of connectedness not only with others but with the

institution as they proceed through a program (Zawacki-Richter & Anderson, 2014). Some educational researchers have found that connectedness is multi-faceted and that some instructional strategies appear helpful for the cultivation of a stronger sense of connectedness (Zimmerman & Nimon, 2017). Researchers have proposed that if students lack a sense of community with other participants and with the institution, they are more likely to report low levels of success and satisfaction (Garrison, Anderson, & Archer, 2010; Rovai, 2002, 2009; Tu & McIsaac, 2002).

While a sense of community with other individuals in courses is a critical factor in the success and satisfaction of the student in each course, some experts have more recently suggested that these factors comprise only a part of the student's sense of connectedness in an institution (Jorgenson, Farrell, Fudge, & Pritchard., 2018; Stone & Springer, 2019; Wilson, Gore, & Williamson, 2020). These researchers have suggested that in addition to experiencing community with (or feeling socially connected to) other students, students also need to feel connected with their institution as a whole. The limited literature regarding connection with the institution (or institutional connectedness) describes this perception as a sense of connection that is distinct from and in addition to the students' sense of social connection (or social connectedness) with other students in the classroom setting (Jorgenson et al., 2018; Stone & Springer, 2019; Wilson et al., 2020).

Because connectedness with the institution has been documented significantly less than students' social connectedness in the online environment, it remains unclear what instructional strategies contribute to institutional connectedness. However, because there is overlap between social connectedness and institutional connectedness (Jorgenson et al., 2018), it is reasonable to explore strategies that have been applied to online learning in the past with the goal of cultivating

social connectedness. Synchronous class sessions, in which an instructor meets with groups of students to discuss course content and complete activities, have many characteristics that can foster students' connections with one another. It is worth investigating how this activity type might correlate with students' increased sense of connection to the institution as well as retention.

Statement of the Problem

Online programs have unique and significant challenges with retention of students, particularly as overall higher education enrollment declines. Institutional connectedness (beyond social connectedness with peers and sometimes referred to as "brand identity" in for-profit corporations) plays a major role in supporting student retention and attrition. Institutions have historically cultivated institutional connectedness for face-to-face students through collective, on-campus experiences that help students feel connected to the campus, groups of students, and faculty (e.g., campus sports and clubs, classroom experiences), but these are challenging to emulate in the online setting, particularly for students who would not normally choose to learn online. It is particularly challenging to foster the perception of connectedness to the institution (not just to peers) in the online setting because of the asynchronous and geographically distanced nature of students' interactions with faculty and other students, and activities that have historically cultivated institutional connectedness are challenging to emulate online. Institutions will likely continue to struggle with retention at the same rate unless they can identify and implement effective strategies that support institutional connectedness.

Purpose of the Study

The purpose of this study was to explore the relationship among a synchronous approach to instruction, students' perceptions of institutional connectedness, and retention in online

programs. It seems a bit ironic to explore connectedness during the COVID-19 pandemic. At a time in the world when people are re-examining the importance of connectedness and struggling with feelings of isolation, a study that investigates how academic experiences relate to connectedness can feel incongruous with circumstances. However, the pandemic also provides a unique opportunity to understand connection in the online environment as institutions face pressure to transition more instruction to online in an attempt to increase enrollment. Understanding how institutional connectedness relates to retention for all students (not only those who prefer to learn online) can provide insight for institutions that seek to move face-to-face instruction to an online format. Additionally, developing a deeper understanding of how synchronous instruction contributes to institutional connectedness in the online setting can help universities make instructional design decisions that cultivate a stronger sense of institutional connectedness with the goal of increasing student retention in the end.

Research Questions and Hypotheses

This study used quantitative survey data to investigate the relationship between synchronous instruction, institutional connectedness, and retention in the online setting. The specific questions explored in this study are as follows.

Research Questions

1. What is the relationship between synchronous online instruction and a sense of connection to the institution?
2. What is the relationship between a sense of connection to the institution and intent to continue coursework at the institution?
3. What is the relationship between synchronous online instruction and intent to continue coursework at the institution?

To explore these questions, hypotheses for this study focus on the relationships among three variables: synchronous instruction, institutional connectedness, and retention. Specifically, the hypotheses for this study are as follows.

Synchronous instruction and institutional connectedness

$H1_O$: There is no relationship between synchronous online instruction and a sense of connectedness to their institution.

$H1_A$: There is a relationship between synchronous online instruction and a sense of connectedness to their institution.

Institutional connectedness and retention

$H2_O$: There is no relationship between a sense of connectedness to the institution and intent to continue coursework at the institution.

$H2_A$: There is a relationship between sense of connectedness to the institution and intent to continue coursework at the institution.

Synchronous instruction and retention

$H3_O$: Students that participate in synchronous online instruction are equally or less likely to continue coursework in future terms.

$H3_A$: Students that participate in synchronous online instruction are more likely to continue coursework in future terms.

Significance of the Study

The importance of connectedness is not a novel idea. Studies have long suggested that there is a positive correlation between student success in the distance education setting and the students' sense of community within individual courses (Garrison et al., 2010; Rovai, 2009; Skinner, 2007; Zawacki-Richter & Anderson, 2014). The details of this relationship have been

explored to a significant extent, and they continue to be explored as new instructional tools and techniques are created for distance classrooms. However, the cultivation of community within individual classrooms does not appear to be sufficient for a satisfying student experience (Glazer & Wanstreet, 2011; Rovai, Wighting, & Jing, 2005; Shin, 2002) and, in many cases, retention (Horn, 2014; Tinto, 2012; Wilson et al., 2020; Wilson, Gore, Renfro, Blake, Muncie, & Treadway, 2018).

Satisfaction is not where the problem with connectedness ends. Despite the relative growth of online education, researchers caution institutional leaders not to draw optimistic conclusions about retention issues in the distance classroom-based comparisons with retention in face-to-face settings (Allen & Seaman, 2015); retention in the distance setting appears to be complex in nature, and retention results that are presented in some reports do not address underlying factors that may be significant to the online environment.

In addition to the student benefits, satisfaction and retention are rewarding for institutions, whether in a face-to-face or distance setting. According to several researchers (McDearmon, 2010; Monks, 2003; Tsao & Coll, 2005), students who feel connected to their institution, are satisfied with their educational experience, and remain enrolled are also more likely to contribute financially to their institution. A study published in 2010 by Kim, Chang, and Jae Ko reiterated this as well, stating that "alumni who identified more strongly with their university donated more financially and participated more frequently in the recruitment of students" (p. 414). For higher education institutions in the current competitive market, helping students feel connected has financial benefits beyond continued tuition payments.

Studies focused specifically on distance settings also suggest that a sense of connectedness beyond a student's individual relationships with others is important for academic

student success, as well (Glazer & Wanstreet, 2011; Rovai et al., 2005; Shin, 2002; Zawacki-Richter & Anderson, 2014). This sense of connectedness, some researchers speculate, may be increased by the easy availability of student services or specific programmatic features (Shin, 2002; Zawacki-Richter & Anderson, 2014); however, it is unclear what structural factors within the program or institution, if any, directly support a sense of connectedness in reliable ways. The diversity of institutional structures, program offerings, institutional cultures, and student profiles make an exploration in this area difficult, particularly in online programs that vary so greatly from one another.

As a result of the limited conversation around connectedness at the institutional level in online education, the recommended strategies for addressing this issue have been limited in effectiveness. So far, these strategies have been based largely on instructional strategies to help students build relationships with other individuals. These strategies are effective to a degree, but as students transition out of classrooms or into new communities at the end of each term, the strategies employed within the individual classroom are no longer relevant in the new setting, and the students' sense of connection may be interrupted.

With the goal of retention in mind and widespread enrollment challenges in higher education, the goal of helping students feel connected to their institutions is critical, and the movement of the COVID-19 pandemic through the United States in 2020 has only increased the level of urgency. A survey by Garcia, Adkins, and Bohlig (2020) at the Center for Community College Student Engagement collected responses from 13,000 students nationwide regarding the impact of COVID-19 on their college experience and concerns they have that may interfere with their ability to succeed. Among other topics addressed, 75% of the students noted that feelings of isolation were a concern. Of those who held jobs prior to the pandemic, 61% indicated that

they had less work available, and 7% reported job loss (Garcia, Adkins, & Bohlig, 2020). Not surprisingly, the Association of American Colleges and Universities noted that these challenges in particular can cause students to drop out (Garcia et al., 2020).

As institutions expand online learning to mitigate the health risks of COVID-19, it is important to make sure that the strategies selected actually support students' connections with their institutions in an effort to help students persist through their coursework. This is especially true for students who do not prefer online learning but are in the online setting due to COVID because they may struggle feeling connected with the institution in an online setting.

Definition of Terms

There are a variety of ways experts define and describe concepts related to connectedness, which seems to contribute to the ambiguity and lack of information in this area. To bring clarity to the discussion for the purpose of this study, working definitions will be used for "social connectedness" and "institutional connectedness." For the purposes of this study, social connectedness refers to a students' perception of a shared relationship with other individuals (students, faculty, and staff) at a university. Other related terms from literature are "belonging" and "community." In this study, this could include students, faculty, and staff.

Likewise, an individual's perception of a shared relationship with (and personal tie to) the institutional organization as a whole (which includes individuals the student may not know personally) is institutional connectedness. Related terms from literature are "identification," "organizational identification," and to a certain extent, "Identity Fusion." In this study, institutional connectedness generally refers to a sense of relationship between a student and the organization overall.

Due to the plethora of variations in instructional approaches, it is also worth defining "synchronous" and "asynchronous" instruction. For the purpose of this study, synchronous instruction includes live group activities, typically including faculty, in which students are required to participate. In online courses, synchronous activities commonly take place over a video conferencing platform (e.g., Zoom, Google Meet). Asynchronous activities are those that require students to complete work independently and at a time of their choosing (often within a defined period). Asynchronous activities often include discussion boards, papers, video presentations, and other assignments students can complete without the live participation of others.

It is important to note that some synchronous work does not require a large group or the presence of a faculty member. Live small group discussions, projects completed with a partner, and virtual office hours are variations of synchronous work that do not require large group engagement. While these are in fact synchronous in nature, this synchronous activity type is not the focus of the paper. Rather, the term synchronous focused in this study on larger group activities that include a faculty member.

Finally, retention refers to the continuation of a student's enrollment from one semester to the next. While broader definitions on enrollment might include cases where a student temporarily un-enrolls for a term to travel or work before returning the following term, "retention" in this paper only describes cases where students take courses continuously, without stopping enrollment (even temporarily).

Organization of the Remainder of the Study

This study is organized into five chapters. The first chapter has introduced the purpose and research questions of the study, and described the current significance of this study in

synchronous instruction, institutional connectedness, and retention. The second chapter outlines literature already available on the retention, connectedness, and synchronous learning. Chapter Two also describes areas where further research could contribute to online education. The methodology of this study is outlined in Chapter Three along with a description of the instrument used (2020 Campus Life Survey at Bethel University). It presents a rationale for using an existing data set obtained during campus closure due to the COVID-19 pandemic and an explanation of the data analysis plan. The fourth chapter outlines the results of the survey relative to the questions of this study, and Chapter Five discusses those results and their implications for higher education.

Chapter II: Review of Literature

History of Distance Education

Distance education began in the early to mid-1800s with the invention of the telegraph and telephone, which provided students with the opportunity to connect with instructors at a distance (Harasim, 2000). In the United States and in combination with the U.S. Postal Service, distance learning became a particularly popular option for office secretaries who sought certification for their positions by sending samples of their work to an institution in Ohio. These programs were popular and useful, but distance education did not become academically recognized by formal higher education institutions until 1892 when the University of Chicago formalized the first, formal learning program at the college level (Casey, 2008). Students in this program communicated with instructors through the mail as they completed their degrees independently. From then until the 1940,s radio increased instructor immediacy (or the student's sense of connection with a teacher) as institutions applied for radio licenses from the Federal Trade Commission to use as an instructional strategy that could augment the colleges' mail-based programs (Casey, 2008). In this model, distance education was a one-on-one experience for learners as they interacted with instructors through the mail and accessed content through books and over the air in independent learning experiences that relied on one-way communication methods.

In 1967, Otto Peters, the Deputy Director of the Department of Methodology of Teaching at the Educational Center in Berlin, Germany, noted deficiencies in efficiency and quality in distance education. Comparing the distance education model to manufacturing, Peters (1967) suggested a more "industrialized" approach to the creation and delivery of. Peters's suggestion paved the way for an entirely new way of thinking about distance education. While it had been

costly, inefficient, and isolating, Peters' work urged educators to begin visualizing distance courses for the first time as a classroom containing groups of students with needs that could be met in similar ways. This industrialized model allowed a streamlined approach to course development and understanding about distance learning, and it served as the foundation for discussions about consistency and quality in course design and assessment. While it was not his primary intention, Peters's concept of industrialization would improve the overall distance education experience for students and highlight the need students have for a sense of connectedness for distance learners.

As the programs grew in popularity and stature, many academic leaders questioned the viability, impact, and quality of distance programs. Previously, distance courses and traditional courses had been vastly different in many ways as they were adapted for individual learners. With the advent of the Internet, distance education had the capacity for the first time to transition distance students to a new format of learning. Classrooms were no longer limited to an individualized, one-on-one format; instructors and students could now interact in a collaborative manner similar to the face-to-face setting.

Through the development of online education during the early 2000s, higher education enrollment grew. This new, streamlined, and exciting way of delivering education allowed institutions to grow online programs quickly and deliver instruction to larger groups of students. Students who could not typically be able to attend courses on campus due to work or family commitments could enroll. Over time, the flexibility of online learning and the resulting enrollment of "non-traditional" students who would not otherwise be able to enroll changed the overall enrollment patterns and curricular needs in higher education. However, the growth trend of higher education did not continue.

In a summary of higher education enrollment issues, Copley and Douthett (2020) noted that from 2011 to 2019, higher education enrollment in the United States fell each year, dipping below 18 million enrollments in 2019 for the first time in a decade. Unfortunately, the trend will likely continue in the near future rather than improve. Birthrates fell significantly between 2008-2011, causing a coming decrease in college-age students, and immigration has decreased since 1991. These reductions in population groups that are the largest target market for colleges and universities will limit the number of students in the United States that are eligible to enroll. The problem is expected to continue, with enrollment continuing its decline through at least 2029 due to a 15% projected decrease in college-age population during that time (Copley & Douthett, 2020; National Student Clearinghouse Research Center, 2019).

Despite the continuing general enrollment decline in higher education over the past several years, distance education specifically has continued to grow when compared with face-to-face offerings (Allen & Seaman, 2017). These growth trends appear to be reaching a plateau compared to the rates at which they have been growing in previous years, but researchers encourage institutions not to be fooled by the slowdown. The plateau is one of growth, not in overall enrollment; institutions continue to enroll online students at a steady increase each year. In a study released in 2017, Allan and Seaman noted that almost 30% of higher education students had participated in at least one online course. Almost 15% of the students studied were enrolled in fully online programs, with undergraduate students representing the majority of the cases included (Allen & Seaman, 2017). Ironically, despite the relative increase in online learning, researchers report that online programs also have higher attrition rates than traditional programs (Hart, 2012; Stone & Springer, 2019; Wilson et al., 2020), which creates a challenge for these programs to maintain the enrollment they have managed to secure in the first place.

The continued growth in online program enrollments is important to note especially in comparison to significant decreases in higher education enrollment overall (Allen & Seaman, 2017). Enticed by higher enrollment, the majority of higher education institutions now utilize distance programs as a central part of a strategic enrollment plan (Allen & Seaman, 2016). While the higher enrollments for online learning are encouraging, retention rates remain a challenge that online programs experience even more significantly than face-to-face programs.

Impact of COVID on Higher Education

COVID-related enrollment and retention issues.

The enrollment trends leading up to 2019 were already declining, and then a global pandemic took place. In 2020, with the COVID-19 global pandemic surging, more than 1,300 higher education institutions closed their doors, either cancelling classes or offering instruction online with little warning (Smalley, 2020). Higher education administrators have faced unprecedented declines in freshmen enrollment, with traditional undergraduate rates dropping 0.4% at public universities and 3.8% in private universities. Community colleges saw the greatest decline, dipping 8% in enrollment rates (Lorin, 2020; National Student Clearinghouse Research Center, 2019).

These pandemic-related declines augment the troubling issue of enrollment, but an even more concerning metric demonstrates a specific issue with enrollment declines. When comparing enrollment patterns among students who just graduated from high school (or "immediate enrollments"), it is clear that some student groups have avoided enrollment more than others (Hoover, 2020). The reason is unclear, but the numbers are troubling. The 2020 enrollment report from the National Student Clearinghouse Research Center (NSC) indicated that minority students and those with low or no income experienced a significant drop in

enrollment in comparison with drops noted across the board. These declines are also significant in combination with enrollment declines in the same student groups in 2019. In 2019, immediate enrollment declined 1.1% in students from high minority schools, 1.2% in students from low income schools, and 2.0% in students from high poverty schools. However, in 2020, immediate enrollment declined 26.4% in high minority schools, 29.2% in low income schools, and 32.6% in high poverty schools (Hoover, 2020; National Student Clearinghouse Research Center, 2020). Compared with the now 13% decline in immediate enrollment across the board, these numbers indicate that the pandemic has impacted enrollment unevenly across the population.

Unfortunately, immediate enrollment declines in these student groups do not reflect "gap year" decisions. In higher income and low minority groups, students can sometimes defer enrollment and still successfully enroll in a college or university later. Students in minority groups or with low (or no) income typically do not enroll unless they enroll immediately (Hoover, 2020).

It is important to note that while enrollment has fallen steeply during COVID across the board, online programs continue to grow in enrollment. The NSC reported in 2020 that while enrollment suffers in traditional colleges and universities, institutions with primarily online enrollments have actually increased 6.1% as compared with 2019 enrollments. Part-time undergraduate and full-time graduate students contributed most significantly to the increase (June, 2020; National Student Clearinghouse Research Center, 2020). Competition for enrollments in higher education has become fierce, and the only sector that is succeeding currently is online.

Enrollment and retention declines make an institution's ability to retain already-enrolled students of utmost importance. If colleges and universities cannot enroll students sufficiently,

losing students in attrition becomes a critical second problem that can impact revenue and eventually the viability of the institution. To combat this, universities across the nation responded to the pandemic-related campus closures by transitioning courses from a face-to-face format to online. Knowing that critical retention issues could result from student satisfaction problems if students were not satisfied with instruction, faculty experimented with strategies and technologies that could help them deliver their content engagingly and meaningfully.

COVID-related changes in instructional strategies.

When institutions across the United States closed in March 2020 due to the surging pandemic, they hoped to re-open a few short weeks later. However, rather than returning to instruction as usual, they resumed instruction in an online format, using synchronous and asynchronous teaching strategies to support student learning (Quezada, 2020). For many institutions, transition to online meant urging faculty to replace face-to-face sessions with other synchronous, large-group opportunities (i.e., Zoom meetings) with the goal of simulating the experience students had been having on campus.

This transition to synchronous sessions came with mixed feedback, however. A study focused on the experiences of teacher education students at a California liberal arts college, asked students about their preferences around synchronous meetings revealed that many students strongly preferred to continue seeing classmates in regular synchronous meetings rather than working asynchronously, as it increased their sense of connection and reduced their sense of isolation (Quezada, 2020). Students requested more synchronous time with faculty and peers than what was required because they felt it was helpful overall. Faculty agreed that synchronous sessions were useful, reporting that synchronous teaching felt like the most effective format when considering the iterative and relational aspect of teaching and learning (Quezada, 2020).

Interestingly, the study in California (Quezada, 2020) contradicts the findings of an earlier study. In this study, 160 students participated in an online technology course, which included in-synchronous meetings. Participants completed a survey, and those who participated in synchronous activities completed an additional interview. The feedback from students in this study suggested that online learning, even when it includes synchronous activities, fosters a sense of disconnectedness for students (Offir, Lev, & Bezalel, 2008). One possible reason for this contradiction is that technology used for synchronous sessions in 2008 was quite limited compared to the technology available for such activities in 2020. Technological limitations have been known to create a sense of increased distance rather than increased proximity, which could explain the differences in student responses.

However, the 2008 findings cannot be entirely dismissed. Similar to the 2008 findings, a 2020 survey of the students at Okanagan, a college located in British Columbia, revealed that students struggled more with motivation and a sense of connectedness with others and the institution when instruction moved from the classroom to online (Day, 2021). The contradiction in data regarding the relationship between synchronous instructional activities and institutional connectedness suggests it would be helpful to investigate the relationship further.

Problems in Connectedness and Retention

Sense of institutional connectedness.

One of the significant challenges that online education faces is the ability to help students feel connected in meaningful ways to other individuals and to the institution as a whole. "University connectedness," (or "institutional connectedness" in this paper) is the student's perception that they belong at an institution, and that their presence is valued and important there (Dingel & Sage, 2016; Goodenow, 1993; Hotchkiss, Moore, & Pitts, 2006). Distinct from a

sense of connectedness with peers in the institution, this recent concept is challenging to define and demonstrate clearly.

As such, institutional connectedness has been a recent topic of research in the field of education because of its suspected positive benefits. Literature to this point has demonstrated that students with a strong sense of connection to the institution can positively impact their attitude toward learning and their intention to continue with coursework (i.e., persist) (Horn, 2014; Hotchkiss et al., 2006; Tinto, 2012; Wilson et al., 2018; Wilson et al., 2020).

While this sounds promising, it is a particular challenge for institutions that deliver online instruction because institutional connectedness is impacted by program modality. A 2020 study by Wilson, Gore, and Williamson explored the relationship between students' perception of institutional connectedness and program modality. The researchers gathered data from 534 undergraduate students in a variety of face-to-face, online, and blended programs at a university in the Southeastern United States. In this study, students completed a survey that measured their Psychological Sense of School Membership and also asked about program modality. This study demonstrated that students who take all of their courses online have a weaker sense of institutional connectedness than their peers who are taking some or no courses online (Wilson et al., 2020).

Retention.

An additional 2020 study by Wilson, Gore, and Williamson at the Southeastern University referenced previously explored the relationship between students' institutional connectedness and their intent to re-enroll. In this survey, 261 students from a variety of face-to-face, online, and blended programs completed a survey that inquired about continued enrollment plans and measured their Psychological Sense of School Membership. This study replicated the

researchers' earlier findings that students in fully online programs have a weaker sense of institutional connectedness, but surprisingly showed that there is no relationship between program modality (face-to-face, online, blended) and intention to persist with coursework. However, for both online and face-to-face students, a sense of institutional connectedness correlated significantly with students' intention to persist (Wilson et al., 2020).

With the decline in enrollment in higher education and the high value of retention, this is a significant challenge. It is particularly challenging for online programs for two reasons. First, retention is already a significant struggle for primarily online institutions as compared with traditional campuses, making the problem larger and more difficult to address in the first place. Second, students are likely to experience a weaker sense of institutional connectedness just because of the online modality. This undercuts the positive impact that institutional connectedness typically makes toward retention.

Problem summary.

Unfortunately, for institutions that typically deliver instruction on campus but are now offering courses at a distance due to COVID, the connectedness and retention issues are particularly unfamiliar and painful. With pressure to survive financially through a pandemic that has steepened enrollment and retention issues, faculty and administrators who offer instruction online need to consider instructional approaches that will support students' sense of institutional connectedness and increase retention. With a better understanding of the instructional approaches that support institutional connectedness and retention, institutions may be able to retain students more successfully during the pandemic. Additionally, institutions that offer primarily online instruction will be able to benefit long term as they apply the understanding to their regular current practices.

It is possible that synchronous offerings can support institutional connectedness because they mirror face-to-face instruction by bringing students and faculty together in the same time and "place" for learning. It is also possible that if students have an increased sense of institutional connectedness due to synchronous sessions, they may be more likely to persist, raising the retention rates for programs. However, this question needs further investigation. And given the pandemic as well as the overall shift of enrollments toward online education, it should be investigated with students who are both likely to enroll in face-to-face as well as online. This investigation requires a foundational understanding of the history of students' perception of connectedness within the distance education setting, the psychological underpinnings of connection, and strategies that may address the psychological need for connection.

Theoretical Foundation for Social Connectedness

The idea of helping students feel connected with others at the university is not new. When distance education started, educators speculated that students struggled feeling connected to others at the university, and that this perception a result of instructional strategies and course design features. As distance education became popular, distance educators embraced the new opportunities available through technology, and the interactive nature of distance courses became a distinguishing feature between "distance" courses and "correspondence" courses (McIssac, Blocher, Mahes, Vrasidas, 1999, p. 122), which continued to rely on the U.S. mail and instructional methods that did not require interaction between learners. With students required to interact on a regular basis through a newly collaborative learning setting, academic leaders began to think about how to meet distance students' social needs for healthy interactions in addition to the cognitive needs as well.

Social presence and sense of community.

One of the early perspectives that provided an understanding of individuals' interactions with others was the Social Presence Theory. In 1976, Short, Williams, and Christie described social presence as "the degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships" (p. 65). Following their work, which provided a basic definition for the theory to begin with, educational researchers applied the Social Presence Theory to course design as they sought to understand more about how individuals relate to one another whether together in person or relating at a distance.

This Social Presence Theory was beneficial for helping instructors support a sense of connectedness in student groups that were learning in the same physical location. However, the original theory is limited in its applicability to online settings. This is due to the fact that students learning in an online setting cannot rely on physical proximity for a sense of connection. Additionally, interactions between classmates are often asynchronous, which removes a sense of proximity in time as well.

While Social Presence Theory researchers focused on interactions between individuals within individual courses, others focused on interactions between individuals and groups. In 1986, McMillan and Chavis proposed the Sense of Community Theory, intended to describe the critical elements of effective communities. Based on a review of recent literature regarding communication, social organization, and community involvement, the theory evolved over several years before coming to publication. McMillan and Chavis' Sense of Community Theory consisted of four elements: membership, influence, integration and fulfillment of needs, and shared emotional connection (McMillan & Chavis, 1986, p. 9). As a combination of these four elements, McMillan and Chavis concluded that the clearest definition of a Sense of Community

is “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” (McMillan & Chavis, 1986, p. 9).

The Sense of Community Theory is regarded as a major source of social understanding in distance education research. However, it has not been without its critiques. The original version of the construct was conceptualized specifically for physical communities of individuals, and the elements of the construct were conceived with the assumption that individuals could draw from shared personal relationships (McMillan & Chavis, 1986). This limited the applicability of the construct for the distance education setting, and the Sense of Community scale (Sense of Community Index, or SCI) used to measure community was not valid for virtual communities. Given these limitations, educational researchers continued refining their understanding of presence and connection for application to the online setting.

By the late 1990s, social presence, sense of community, and learner connectedness in the distance setting had become a topic of interest for many educational researchers in distance programming due to its obvious importance in the setting. In 2000, Garrison, Anderson, and Archer proposed the *Community of Inquiry* model for distance education. This landmark model provided a preliminary framework for analyzing the role that each of these presences play in the distance setting and their importance in the distance education field. Since the original model proposal, additional validation of the *Community of Inquiry* has confirmed the importance of Social Presence as it relates to the achievement of learning outcomes and the development of relationships in the distance setting (Garrison et al., 2010; Rovai, 2009; Skinner, 2007).

The *Community of Inquiry* model suggested that an effective distance classroom included three domains, or “Presences.” Two of the presences were the Cognitive Presence (reflecting the

content expressed in the course) and the Teaching Presence (reflecting the instructional design of the course, or the structure through which the content is delivered). Along with these two domains, the original version of this model included Social Presence as one of the three basic domains of effective distance instruction. Garrison and Archer (2001) defined social presence in this model as the "ability of learners to project themselves (i.e., their personal characteristics) socially and emotionally, thereby representing themselves as 'real' people, in a community of inquiry" (Moore, 2013, p. 107). Interestingly, Garrison et al. commented in a 2010 review of the 2001 work that when crafting the model, their greatest concern about their model's viability was in regard to a social presence. This was due to the emphasis that had been placed on social presence leading up to the time of their original study and their opinion that research, to that point, had neglected the interplay of the cognitive and teaching presence domains, which they felt were required for an accurate picture of social presence (2010).

In Garrison, Anderson, and Archer's 2010 review of the original *Community of Inquiry* model, the researchers noted that there is more work to be done in understanding the relationship between Sense of Presence and other presences as described in the model. In fact, the 2010 review of the model suggested some possible modifications to the model, including the addition of some behavioral categories within the domain (i.e., open communication and group cohesion) and stated that some evidence indicates that students prefer developing a "shared social identity" in a formal distance course over personal relationships, which is defined as a shared understanding of the purpose of the course (Garrison et al., 2010, p. 7). Garrison suggested al. (2010) suggested that social presence, while still addressing the same categorical dimensions as they had originally perceived, is likely more accurately described in terms of identification,

communication, and relationships; they contended that these terms were present in the original model concept but had not been made clear (Garrison et al., 2010, p. 7).

In some cases, the lack of conceptual clarity has made it challenging to apply the model consistently and effectively. Depending on the situation, researchers have suggested adjustments to the *Community of Inquiry Theory* for their setting, purpose, or population. For example, researchers disagree on the exact definition of Social Presence as it applies to distance learning. More specifically, Gunawardena (1995) noted that while social presence is based on objective factors, it is ultimately subjective and perceptual. Garrison, Anderson, and Archer suggested that social presence is effective when inclusive of cognitive and teaching presences (Garrison et al., 2000). Tu and McIsaac (2002) drew a connection between social presence and a sense of community by stating that the theory is characterized by feelings of community or belongingness a learner experiences in the classroom. Each of these definitions highlight a different aspect of Social Presence as is relevant to the perspective most helpful in the setting, and it is unclear which aspects of Social Presence represent the central definition of the theory.

Regardless of the theory definition, however, it seems clear that many researchers agree on a few basic commonalities when describing the overall theory of Social Presence. First, Social Presence encompasses the interaction between individuals that personally know one another (Biocca, Harms, & Gregg, 2001; Garrison et al., 2000; Gunawardena, 1995). Second, Social Presence also encompasses a student's sense of connectedness with other students (Biocca et al., 2001; Garrison et al., 2010; Tu & McIsaac, 2002). Third, the inclusion of Social Presence in course design is a critical component of effective course planning in order to meet the social needs of students within the course (Garrison et al., 2000, 2010).

Problems with Social Presence and Sense of Community theories.

While there does not seem to be consistent agreement throughout literature as to the definition of Social Presence, how it relates to a sense of community, or which construct applies most effectively to the sense of connections students experience with one another and their institution in the distance setting, researchers do seem to agree on two basic, overarching ideas that help to frame the discussion. First, before its application to the field of distance education, researchers understood Social Presence to be a combination of the awareness of others during interactions and the appreciation of the interaction, itself (Garrison et al., 2000, 2010; Rice, 1993; Short et al., 1976). This theme represents a broader and more generalized conceptualization of the sense of connection students might experience with one another and with their institution, and provides a wider basis of explaining issues students experience with connection. Second, despite the possibility of examining connection more generally, researchers also perceive the Social Presence and connection constructs as being conceptually complex because it is a measurement of the subjective student experience, which is ultimately a matter of perception (Gunawardena, 1995; Tu & McIsaac, 2002). This is particularly challenging given the variety of students and institutions wrestling with the need for connectedness, and the complexity appears to be true even if specific qualities or attributes can be identified as contributing to connection in a specific institutional setting (Gunawardena, 1995).

In discussing the complexity of the Social Presence construct, Rovai (2002, 2009) moved away from focusing on the "social presence" terminology and focused more on "sense of community," an applied notion of the theory as it relates to distance course participants. This definition resonates with Tu and McIsaac's research in 2002 as they explored social presence applied to distance education settings, as well. The work of these researchers suggests that a

sense of community among course participants can be cultivated by specific instructional techniques utilized in the course design or instructional methodology within individual classrooms. Furthermore, a strong sense of community in individual classrooms ultimately increases student success and retention in a higher education program overall (Rovai, 2002, 2009; Tu & McIsaac, 2002).

Shin (2002) offered a transition away from confusing (and sometimes conflicting) terms for distance educators who struggle to cultivate connectedness, stating that connectedness is "the belief or feeling that a reciprocal relationship exists between two or more parties involving an individual's subjective judgement on the extent of the engagement with which he or she is concerned" (p. 123). Shin suggested that the student encounters three types of relationships which contribute to an overall sense of connectedness during the student's academic experience: the student-student relationship, the student-teacher relationship, and the student-institution relationship. According to Shin, support for these relationships includes characteristics of course design and student services (2002, p. 131).

Shin (2002) extended observations about relational experiences in the educational setting to a new framework, "Transactional Presence," which assumes that a student's needs for connection during the learning process are much more comprehensive than previously thought. Shin suggested that distance institutions

> go beyond merely envisioning [the students'] geographic locations (telepresence) or feeling intimacy or togetherness in terms of sharing time and place. Rather, the perception should reflect, in some way, distance students' idiosyncratic needs for connection with learning resources of support that they can turn to as the needs arises (2002, p. 122).

To illustrate the expanse of the connectedness concept suggested, Shin (2002) outlined examples of connectedness issues and opportunities in the broader institutional context. This important work finally illustrates the idea that students' sense of connection is not only impacted by course-based experiences, but also by the broader institutional experience they have with people and structures outside of individual courses. Shin's work stopped short of describing specific institutional actions or attributes that would contribute to students' sense of connectedness, citing this as an area that could yet be explored.

Theoretical Foundation for Institutional Connectedness

Identification.

While distance education experts have heavily explored Social Presence and Sense of Community theories as strategies for building a sense of connectedness in the learner's program experience, a few theories relevant to group alignment, belonging, commitment, and connectedness have remained largely unexplored in relation to distance education. Rather than describing the observable function and organization of group members within their environments, some psychological researchers have focused on the development of individuals' identities and the responses of personal and social identities in certain circumstances. These researchers use psychological constructs such as Social Identification, Organizational Identification, Self-Verification, and Identity Fusion to describe the individual group members' experiences relative to the group with the goal of explaining and predicting behavioral patterns.

Social identification.

Tajfel and Turner's 1979 Social Identification Theory proposed that individuals will categorize themselves and others into groups and then "identify" with the groups they are associated with by taking on the identity of those groups and aligning behaviorally to match the

group. In most cases, this leads to favorable attention for those who an individual perceives are in a "group" with them and negative attention for those classified outsides of those groups.

Mael and Ashforth (1992) expanded Tajfel and Turner's explanation of Social Identification Theory, stating that social identification "is the perception of belongingness to a group classification" (p. 104). They found that when an individual identifies with a group, he or she perceives himself or herself as a prototypical version of the group, exemplifying the group's characteristics and values and sharing the group's fate (Mael & Ashforth, 1992). Ashforth and Mael (1989) also wrote that the factors traditionally associated with group formation (social identification) are not necessary for group formation but still may affect the formation process if not included in a suitable way (p. 35).

Organizational identification.

One of the settings in which social identification can specifically be applied is within the organization. Ashforth and Mael (1989, 1992) studied the application of identification constructs in organizations, eventually crafting the "Organizational Identification" Theory. Ashforth and Mael noted that even though identification is a familiar construct, very few people had completed research on it in the organizational setting. While identification overall is familiar, organizations have experienced significant confusion between organizational identification and internalization, as well as organizational identification and commitment to an organization.

In this construct, psychologists distinguish between organizational identification and professional (or occupational) identification, in which an individual defines him or herself in terms of the characteristics or actions done by people in a specific profession (Mael & Ashforth, 1992, p. 106). In their 1992 study, Mael and Ashforth distinguished between organizational identification, internalization, and commitment. They described internalization as a construct

that refers to the actual "incorporation of values and assumptions within the self as guiding principles" and identification as a construct that refers to the perception of one's social classification (p. 105).

In addition to causing group members to experience feelings of gain through an attachment with their group, Organizational Identification also claims that a group member who has identified with the group and then leaves will experience a sense of loss over the transition away from the group (Ashforth & Mael, 1989)

Organizational Identification has appeared to be a promising perspective for organizational leaders interested in pro-group behaviors and retention. In a 1992 study of 297 alumni at a religious college in the Northeastern United States, alumni revealed possible antecedents and consequences of their identification with the organization (Mael & Ashforth, 1992). The study found that students who have identified with the program or the institution and become alumni report higher satisfaction and are more likely than others to be interested in supporting the institution in a variety of ways.

Mael and Ashforth (1992) encouraged supporting the identification of process through a variety of ways, including "the manipulation of symbols such as traditions, myths, metaphors, rituals, sagas, heroes, and physical setting, management can make the individual's membership salient and provide compelling images of what the […] organization represents" (Ashforth & Mael, 1992, p. 28). The identification of alumni with their alma mater will increase the likelihood that alumni will donate personal funds to the school, participate in institution events, and recommend that others attend the institution (Mael & Ashforth, 1992). The identification of alumni with their alma mater will increase the likelihood that alumni will donate personal funds

to the school, participate in institution events, and recommend that others attend the institution (Mael & Ashforth, 1992).

The construct of identification in general is a helpful approach to understanding students' connection to their schools and positive outcomes from that connection. Additionally, however, there is a more specific identification-based construct, Identity Fusion, that researchers have recently begun to explore in relation to connectedness and retention. To best understand this construct, it may be helpful to look back at the construct's beginning decades ago.

Self-verification and Identity Fusion.

Around the time that the Social Identity Theory was being formed, a team of researchers in Texas began to explore people's self-perception in relation to others. In 1981, Swann , Gomez, Seyle, Morales, and Huici (2009) identified and described the Self-Verification Theory. In this theory, Swann et al. suggested that people want to be known and understood by others as they already understand themselves, even if their self-perception is negative. However, their understanding of themselves is largely based on how they have been initially treated by others. From this framework, people perceive the world and make decisions about behavior. Self-Verification was shown through several studies to have significant ramifications for the success of relationships in many contexts (Swann et al., 2009). According to Swann et al., this theory can be extended to groups relationships, in which individuals seek verification of their self-perceptions, both positive and negative, from groups of people with whom they work and relate. In some cases, researchers found that individuals also sought verification for the specific identity they express with (Chen, Chen, & Shaw, 2004) or for the collective characteristics of the group they are associated with (Lemay & Ashmore, 2004).

Interested in the interactions of the social and personal identities of fused individuals within the larger context of a group, Swann et al. (2009) expanded their focus to explore how Self-Verification related to the way an individual's personal and social identities interact. The researchers found that individuals demonstrate varying degrees of identification with groups and that the resulting pro-group behaviors were also variable (Swann et al., 2009). This led Swann et al. to draw a distinction between familiar forms of identification and new concept of identification they called Identity Fusion. In their proposal of the new concept, Swann et al. distinguished between Identity Fusion and other social identification theories, proposing the distinguishing feature of Identity Fusion was a unique interplay of the personal and social identities.

Non-fused individuals, they suggested, may identify with a group through self-categorization, social identity, and self-verification processes (Swann et al., 2009, p. 996). As Turner had suggested (1985), this allows individuals to perceive themselves as symbolic or prototypical members of the group, emulating the characteristics and values of the group and sharing in the group's fate. In the case of identification, the personal identity and the social identity function separately, salient at different times and for different purposes. However, Swann et al. suggested that in some cases, individuals' "stable conceptions of themselves as individuals become fused with their identities as group members," as a result of a process called "Identity Fusion" (Swann et al., 2009, p. 995). In this process, the personal and social identities become activated together as "fused" individuals do not distinguish between personal identity and social identity. This causes a "unique state of oneness with a group, a state that is categorically distinct from the state of nonfusion" (Swann et al., 2009, p. 1000). Swann et al. referred to individuals with a "blurred" or permeable boundary between their personal and social

identities as individuals who are "fused" to a larger group. Those whose social and personal identities were distinct from one another are referred to as "non-fused" (Swann et al., 2009).

Because there is little division between their personal and social identities, activation of one or the other actually activates both identities. The individual's responses related to the group are borne from both the personal and the social identities rather than one or the other because both identities are equally salient during the response. This is in direct comparison to individuals who are non-fused but have still identified psychologically with a group; in these cases, personal and social responses alternate in levels of salience according to the requirements of the situation.

Swann et al. noted that when a fused individual's social and personal identities have been activated and the individual is acting on behalf of the group, the individual is more likely to display pro-group behavior (2009, p. 999), enduring significant challenges with the perception that the outcome will benefit the group. In a study conducted by Swann et al., \survey participants were asked to respond to extreme pro-group behaviors through a series of hypothetical questions both before and after experimental challenges intended to activate their personal or social identities. Questions focused on individuals' willingness to participate in and endorse extreme behaviors for the benefit of the group and/or individuals in the group (i.e., willingness to fight and die for others or sacrifice something for the well-being of the group or another individual in the group). The study indicated a positive correlation between fusion and willingness to endorse or participate in extreme pro-group behaviors; identification showed no clear correlation (Swann et al., 2009). It also indicated that for individuals in a state of fusion, the personal and social identities of individuals are integrated in such a way that activating one form of identity in an individual in turn activates the other; the study suggests that a fused

individual only requires activation of one identity before their other identity can activate and increase their likelihood of endorsement of pro-group behavior.

In 2020, a team of researchers from the University of Texas (Austin) completed a large-scale study that explored Identity Fusion in students within the university setting (Talafir, 2020). Given previous studies on identity fusion that suggest that individuals who are fused with a group will endure through significant hardship in order to remain in the group, Talafir hypothesized that fusion could positively predict strong academic achievement and retention. In their study, 5,722 freshmen completed a pre-matriculation survey that measured students' perception of identity fusion with the university prior to matriculating. The researchers collected GPA and retention information from those students over two semesters. Finally, 875 students completed the survey again during a general education psychology course, allowing researchers to compare perceptions and make correlations with historical data about retention and achievement (Talafir, 2020).

The data from this study showed that students who reported a strong sense of identification (or identity fusion, in this case) with their university were 7%-9% more likely to re-enroll in future semesters, which is a clear and important conclusion from this study (Talafir, 2020). Unlike traditional retention measures that have focused on removing or resolving situational barriers that prevent students from continuing (Tinto, 1971; Yeager, Walton, Brady, Akcinar, Paunesku, Keane, & Dweck, 2016), this study suggested that an "asset-promoting approach" to retention may be more effective and longer lasting because students who experience identity fusion with their university are likely to express loyalty through retention despite great personal cost (Whitehouse, 2018). Additionally, this approach is not dependent on the existence of situational barriers, which may change over time (Talafir, 2020; Walton &

Brady, 2017); rather, because it is more reliant on the individual's perception of self (which is typically more stable than life circumstances), it is a more stable factor in retention.

Interestingly, while Talafir's 2020 study showed a positive correlation between identity fusion and retention, it did not show such a correlation between identity fusion and academic achievement. Rather, Talafir explained that academic achievement appeared to be correlated with retention independently, suggesting that academic achievement is an important factor in retention but is not a direct result of identification (Talafir, 2020).

Identify Fusion is a helpful construct in describing the unique and strong relationship that some individuals experience with a group or an organization. It is also useful to understand the retention benefits of this type of identification along with the factors that contribute to fusion. However, Identity Fusion only describes a very specific and strongly-identified set of students at an institution rather than all students who generally identify with the institution or experience a sense institutional connectedness. For this reason, Identify Fusion is a related but too-specific construct for this paper. That said, as an articulation of a specific form of identification, some of the building blocks for fusion (traditions, rituals, collective hardship) could be useful for institutions that are seeking to increase identification in general.

Institutional Connectedness.

Through research around constructs like Social Presence, Sense of Community, and Identification, educators have come to understand the importance of helping students feel connected to one another and to their institutions. While these constructs differ from one another in important ways, they all contribute to a student's sense of connectedness to their institution. Regardless of the construct or terminology used, literature does seem to consistently demonstrate that students in online learning communities benefit in a variety of ways from feeling connected

with other individuals in their courses as well as with the institution. Because connectedness can be linked both directly and indirectly to student satisfaction and retention (Cowan, 2012; Drouin, 2008; Rovai, 2002, 2009) as well as academic achievement (Drouin, 2008), researchers continue to seek a clearer understanding of the concept of "connectedness," which is often described in literature but still poorly understood because of differing definitions and terminology. While there is a significant amount of research that explores students' sense of connection with other individuals in the classroom, the concept of students' sense of connection with the institution is more challenging to describe and research.

Distinguishing an institutional sense of connection from other constructs (especially a sense of community with peers at the course level) is not a new challenge. Rovai, Wighting, and Jing explored this idea in a 2005 study. With the goal of identifying factors that increase a positive school climate for both face to face and online students (and then drawing a comparison between the two), Rovai et al. reported a difference between the online student's experience of connectedness in courses and the student's experience of connectedness at the school level; furthermore, these experiences are unique from the experiences of the face-to-face students at the same institution (Rovai et al., 2005). Glazer and Wanstreet (2011), in a study focused singularly on the issue of institutional connectedness, agreed with the suggestion that students experience different types of connectedness. After surveying 395 doctoral students from different institutions about their perceptions of connectedness within their program, Glazer and Wanstreet (2011) concluded that the students in their study felt connected to other students and also to individual faculty; however, they did not report a strong sense of connectedness with their respective institutions overall (2011, p. 59).

A research team at a mid-sized land grant university in the Midwest agreed that most literature to this point has focused on students' social connectedness with other students rather than a sense of connection with the institution (Jorgenson, Farrell, Fudge, & Pritchard, 2018). Seeking to further describe these constructs, the team explored the difference between social connectedness and institutional connectedness. These studies explored students' perceptions of both social and institutional connection through a series of surveys with questions focused on each. Student responses confirmed that while social connection and institutional connection are in fact separate perceptions, both perceptions are beneficial for the student and the institution. Furthermore, responses indicated that while the perceptions are indeed separate, social connectedness and institutional connectedness are overlapping. Students' sense of institutional connectedness is increased when they sense that they belong in the institutions' programs and with institutional individuals. Additionally, institutional connectedness is enhanced when students perceive that they are well supported, have the sense that they are high achieving, and experience an active and positive social life. Jorgenson postulates that the reason institutional connectedness is so challenging to describe is because of the way it overlaps social connectedness.

Interestingly, this overlap manifests itself in different ways depending on student age. Students between the ages of 18-25 (or within the "traditional" undergraduate college ago group) experienced stronger institutional connectedness when they perceived a strong social connection with other students, particularly when students feel connected with multiple student groups. However, older ("nontraditional") students experienced stronger institutional connectedness when they perceived a strong social connection with faculty based on shared life experiences (Jorgenson et al., 2018). The researchers noted that "any interaction between *any* campus

employee plays a role" (p. 89) in institutional connectedness, and that employees whose roles create space for students to interact with one another socially (instructors, mentorship programs, campus life, dining services) have a distinct, positive impact on institutional connectedness by cultivating social connectedness.

This is an important discovery for higher education, as both social connectedness and institutional connectedness benefit students and institutions. It is also a key understanding for higher education because the approaches to these perceptions of connection overlap; in order to cultivate institutional connectedness and retain students, institutions would be wise it is important for institutions to employ strategies that contribute most directly to their connectedness goal.

In general, students' social connectedness with other students is more widely researched and better understood than institutional connectedness, which is a relatively new area of research in education. Social connectedness with other students has great benefits, but a student's institutional connectedness has positive ramifications that are of great interest to institutions. This is especially true for institutions that offer fully online programs, where retention is of particular concern.

Despite all the work that has taken place in this area, students continue to struggle with a lack of connectedness in distance programs. Students report in some instances feeling connected with other individual students within their classes as a result of community building instructional strategies and experiencing satisfaction with their individual relationships as a result, but distance students still often report a lack of connection with their institutions overall as compared with face-to-face students (Zawacki-Richter & Anderson, 2014). Unfortunately, because institutions have varied so greatly in their understanding of and approach to institutional

connectedness for online programs, there is not a strong shared understanding of the strategies available to cultivate institutional connectedness (Zawacki-Richter & Anderson, 2014).

Synchronous instruction and Institutional Connectedness.

Especially during the COVID-19 pandemic, when institutions in the United States turned to online course delivery, understanding the strategies that can foster institutional connectedness (beyond social connectedness) in the online setting is critical. Whereas social connectedness can be cultivated relatively easily through asynchronous means (e.g., discussion boards), these strategies often fail because they place a focus on individual interactions between specific students in small groups. Additionally, strategies that may work well for students who prefer learning online may not work well for students who prefer face-to-face learning (but have been subjected to the online setting due to catastrophe). To move beyond social connectedness and ensure that all students have opportunities to develop institutional connectedness, faculty and administrators should consider instructional strategies that remind students they are part of a larger group (institution) and allow them opportunities to see and hear peers and faculty in groups may allow institutions to cultivate connectedness at the institutional level.

A mixed-methods Australian study by Stone and Springer (2019) illustrates this approach. The researchers surveyed students about their satisfaction, motivation, level of engagement, and overall success in a course. They then interviewed 151 online education staff and faculty across 16 institutions and implemented thematic findings from the interviews in course design, focusing on increasing communication and live student-teacher interactions (e.g., synchronous sessions, virtual office hours). Once students had completed the revised courses, the team re-administered the student survey to explore if the course design changes and increased student-teacher interactions impacted student experiences. Incredibly, student responses to all

survey items indicated that the increase in student-teacher interactions led to a significant increase in satisfaction, motivation, level of engagement, and academic achievement.

In their discussion about the study, Stone and Springer (2019) reminded readers that several researchers have already described the value of interactions between students and their instructors, both synchronously and asynchronously, and that faculty who spend time interacting directly with students increase the perception that instructors and the institution are connected and interested in the success of individual students, increasing institutional connectedness and eventually retention. These interactions can include asynchronous multi-media opportunities such as announcement videos and discussion boards, but they can also include synchronous options such as video conference office hours or live lectures and interactive learning opportunities that allow students to see and hear one another in a live format (Stone & Springer, 2019). They conclude that "effective online course design needs to include activities and assessment tasks that are not only directly related to learning outcomes, but that are also designed to engage students in communication and collaboration with each other through both synchronous and asynchronous means" (p. 157). Specifically, the researchers suggest ensuring that frequent and meaningful interaction opportunities be designed to recognize and explore the knowledge students bring to class on their own and integrate course content with meaningful, responsive communication that includes the instructor and the students (Stone & Springer, 2019).

While it appears that synchronous class activities may help institutions foster institutional connectedness because they prompt live communication between students and faculty, there are some drawbacks to this approach. Stone and Springer (2019) encouraged the use of synchronous activities but noted that requiring them can create unavoidable schedule conflicts for students who have to work or care for family during the time of the activity. This can cause additional

challenges for students who are low-income rather than providing deeper engagement for them (2019). Related to this challenge, students who lack access to good internet connectivity do not benefit significantly from synchronous activities because they are not able to reliably engage with the session; rather, they experience a stark awareness of their separation from others who are able to meet in their absence (Villanueva, Camilli, Chirillano, Cufré, deLandeta, Rigacci, Velazco, & Pighin, 2020). Finally, Stone and Springer (2019) advised faculty who plan to utilize synchronous sessions to limit both the length of the session and the number of students enrolled for the purpose of cultivating interaction during the sessions. Synchronous activities that are too long lose students' attention and become an unappealing barrier to learning and connection. Likewise, activities with too many participants (e.g., 300-participant lecture) limit opportunities for students to interact with the instructor and with others, eliminating the benefit of increasing connectedness (Stone & Springer, 2019).

Gaps in Previous Approaches

Despite all the research done to describe connectedness and related strategies, there are some notable gaps in the research. First, the literature to this point has largely focused on measuring how socially connected students feel with other individuals in the program. A student's sense of social connectedness with other individuals (students, instructors, administrators) is important to their success, but it differs from a student's sense of institutional connectedness. This is an important distinction for online learners who often lack the natural growth of those interpersonal relationships that might develop from seeing others regularly in the physical classroom. This is especially true in instances where student groups and instructors change frequently throughout a program due to the flexible enrollment options available to

students. With the end goal of increasing retention, it is important to further describe institutional connectedness, its benefits, and its contributing factors.

Related to this gap, because literature about institutional connectedness is limited, research has not yet described how some course design strategies (e.g., synchronous activities) might contribute to students' perception of their connection to the institution overall. As institutions have turned to synchronous activities to meet student needs online during the pandemic, exploring how these activities correlate with institutional connectedness can enlighten faculty, administrators, and student support staff as institutions continue to expand online offerings and serve students well. This is particularly true since synchronous activities provide both benefits and drawbacks to students, and institutions need to make strategic choices regarding how to implement this strategy.

Another important literature gap to note relates to research participants. To this point, as would be expected, literature about institutional identification in the online learning context has largely gathered data from students who have elected an online learning format. A 2020 qualitative, observational study conducted with faculty at several institutions who had transitioned to the online setting demonstrated that the transition had gone better for some students than others. Faculty shared that some student feedback expressed preference for online learning, and some still expressed preference for face-to-face learning (Day, 2021). Interestingly, it appears the preference may be partially due to previous student experience in the online setting. The study revealed that students who initially register for only face-to-face courses typically prefer face-to-face instruction over online instruction in general, and those who have registered for one or more online courses are comfortable in the online setting (Day, 2021). Furthermore, a different study of 356 students in an introductory science course at Sinclair

University, a community college in Ohio, indicated that students with previous online learning experience had more confidence in online course work and were generally more successful (Day, 2021).

Because students in online programs to this point have been those that elected online learning (and often have experience in it), the data used to shape online instruction recommendations to this point has been limited to the feedback of students who are already experienced with online instruction. Limiting data to those who elect online learning has been helpful in informing practices so far, but a broader selection of perspectives is helpful in order to draw conclusions about institutional connectedness that can be relevant to all students. This is particularly relevant given the COVID-19 global pandemic, in which universities across the world moved instruction from the face-to-face format to online (even for students who would not ordinarily opt for online learning). Data about students' perceived identification with their institution is useful as schools strive to help all students succeed in the online classroom when needed (not just students who would opt for online learning independently).

Higher education's understanding of institutional connectedness is, at best, developing. The COVID-19 pandemic has provided education with an opportunity to further describe institutional connectedness and its implications as many students who would not ordinarily elect online learning are engaging in the online format anyway. The pandemic has also put pressure on faculty and institutions to experiment with new modes of teaching and learning, and many institutions have elected synchronous course options as a solution. Since it is possible that the lessons learned during the pandemic will encourage institutions to modify post-pandemic instructional strategies as well (Day, 2021), it is important to better understand the relationship between synchronous instructional activities and institutional connectedness.

Chapter III: Methodology

Purpose of the Study

The purpose of this study was to explore whether student participation in synchronous online instruction correlates with a sense of institutional connectedness (and eventually retention). To accomplish this, the study examined the relationship between synchronous online instruction and institutional connectedness as well as the relationship between institutional connectedness and retention in online programs. While some studies have already demonstrated a positive correlation between institutional connectedness and retention in online programs (Wilson et al., 2020), re-examining this relationship during the COVID-19 pandemic provides a unique perspective on the relationship because the sample includes students who may not ordinarily elect to learn online.

Understanding how institutional connectedness relates to retention for all students (not only those who prefer to learn online) can provide insight for institutions that seek to enhance online offerings or move face-to-face instruction to an online format. This unique perspective on institutional connectedness can help institutions develop a deeper understanding of how synchronous online instruction contributes to institutional connectedness in the online setting can help universities make instructional design decisions that cultivate a stronger sense of institutional connectedness with the goal of increasing student retention in the end.

Theoretical/Conceptual Framework

The idea of students' sense of connectedness with one another in the online setting began with Garrison, Anderson, and Archer's Social Presence theory (2010). This theory described the need students have to relate to one another in the online setting with the goal of developing a perception of course participants as real and whole individuals. Garrison et al. theorized that

Social Presence and the ability to interact as full and relational people in the educational setting was important for student achievement in the classroom. This theory deeply influenced the development of curricular and instructional strategies for online education in the early years, and it remains relevant in discussions about students' social connectedness with one another as well as academic achievement.

Building on this early work, Jorgenson et al. (2018) demonstrated that there is a distinction between students' social connectedness with other individuals and their sense of connection with the university as a whole. In their work, Jorgenson et al. identified that while separate, these perceptions are also overlapping. The distinction between the constructs suggests that instructional strategies which are effective for cultivating students' individual connections with one another might differ from strategies that are effective for the cultivation of institutional connectedness. Specifically, the team found that when students' social connectedness with one another increases, they are more likely to also report an increased sense of connection with the institution. The overlapping nature of the constructs can also suggest that there may be some strategies that are effective for both perceptions. Specifically, strategies that allow students to connect personally with one another but also help students perceive themselves as a part of the broader institution may help students experience connectedness at both levels.

A more recent study by Wilson, Gore, and Williamson explored the concept of institutional connectedness further (2020). This study highlighted a positive relationship between students' institutional connectedness and their intent to continue with coursework. Interestingly, they found that retention is more directly correlated to institutional connectedness than it is to program modality (e.g., face-to-face, blended, online), suggesting that the real

retention challenge online programs have is due to a lack of institutional connectedness in the online setting rather than the course modality alone.

In this study, the concept of institutional connectedness is theoretically more relevant than the Social Presence construct because it acknowledges a broader, institutional relationship above and beyond students' relationships with other individuals. However, Social Presence is still relevant to the discussion as an overlapping construct that has been well explored; the overlap between these theories suggests that interactive instructional strategies (such as synchronous activities) known as contributors to Social Presence may also contribute to institutional connectedness if designed in a way that allows students to perceive themselves as part of a larger group. The understanding that institutional connectedness has implications related to retention explains why institutional connectedness is an important discussion, especially as more institutions include online learning as a central educational strategy.

Leaning on the distinction between social connectedness and institutional connectedness, this study will continue the exploration of institutional connectedness as a distinct construct with retention implications. This study examined one specific instructional strategy, large group synchronous online instruction, as a possible strategy for increasing institutional connectedness and ultimately retention.

This study took a post-positivist approach to the exploration of these variables. According to Creswell (2009), a post-positivist approach to research acknowledges that studies of human behavior cannot claim to present absolute truth but rather aims to identify probable causes that relate to specific outcomes. This approach asserts that while all research is imperfect, well-designed studies can explain objective concepts. Post-positivist research breaks large problems down into smaller, discrete variables that can be observed and measured (Creswell,

2009) in an attempt to objectively explain how factors might influence outcomes. Because the post-positivist approach assumes that research, being imperfect, cannot identify objective truth, it focuses on rejecting null hypotheses rather than proving hypotheses. Surveys that include quantifiable items are a common research strategy for post-positivists because they offer a quantitative approach to human experiences, allowing the researcher to make specific and focused comparisons between survey item responses (Patten, 2014).

Focusing on the post-positivist approach to research, this study sought to explain aspects of the student's experience with synchronous online instruction, institutional connectedness, and retention by separating variables into measurable survey items and comparing responses quantitatively to identify probable relationships between the variables. Student responses to the survey items will be used in an attempt to reject null hypotheses that state there is no relationship between synchronous online instruction, institutional connectedness, and retention.

Research Questions and Hypotheses

The research questions addressed in this study examined the relationships among synchronous online instruction, institutional connectedness, and retention (or specifically, intent to continue coursework). The research questions in this study were as follows:

1. What is the relationship between synchronous online instruction and a sense of connection to the institution?
2. What is the relationship between a sense of connection to the institution and intent to continue coursework at the institution?
3. What is the relationship between synchronous online instruction and intent to continue coursework at the institution?

The researcher hypothesized that there is no correlation among each of the three variables (synchronous instruction, institutional connectedness, and retention). Specifically, the hypotheses are as follows:

Synchronous instruction and institutional connectedness

$H1_O$: There is no relationship between synchronous online instruction and a sense of connectedness to their institution.

$H1_A$: There is a relationship between synchronous online instruction and a sense of connectedness to their institution.

Institutional connectedness and retention

$H2_O$: There is no relationship between a sense of connectedness to the institution and intent to continue coursework at the institution.

$H2_A$: There is a relationship between a sense of connectedness to the institution and intent to continue coursework at the institution.

Synchronous instruction and retention

$H3_O$: Students that participate in synchronous online instruction are equally or less likely to continue coursework in future terms.

$H3_A$: Students that participate in synchronous online instruction are more likely to continue coursework in future terms.

Instrument and Measures

This study was developed by the administration of the 2020 Campus Life Survey, and the purpose and scope of the survey reach beyond the questions of this particular study. The majority of the 2020 Campus Life Survey was created by Bethel University's Office of Assessment and Accreditation. A portion of the questions on the survey, related to COVID-19,

was created by the Higher Education Data Sharing Consortium (HEDS) and shared with Bethel for use in this survey. (A copy of the official written permission for the use of HEDS items is located in Appendix A.) Using HEDS COVID-19 items allows Bethel administration to compare HEDS survey items with 41,000 student responses at 64 institutions across the nation (Higher Education Data Sharing Consortium, 2020).

The survey was administered via an email invitation to traditional undergraduate students at Bethel University's College of Arts and Sciences (CAS). Students at the university's Graduate School, Seminary, and College of Adult and Professional Studies were not included in the administration of the survey. Through this survey, faculty and administrators hoped to collect general annual data related to student experiences as well as understand student experiences with online learning during the COVID-19 pandemic.

The survey was lengthy and included questions on many topics (e.g., about faith, academic achievement, campus involvement, sense of connectedness, and intention to continue coursework during the next semester). A portion of this survey includes questions related to the Fear of Happiness and Attitudes Toward God Scales. An undergraduate student has written an unpublished manuscript for a senior project using the Fear of Happiness and Attitudes Toward God Scales. No other studies have been completed at Bethel University using survey data, but institutions across the United States have drawn their own conclusions internally about trends in the survey items at their campus. Additionally, the Higher Education Data Sharing Consortium has provided summaries of the national trends in survey items on their website.

The items in this instrument that are of use in the present study have not been evaluated for validity or reliability. Because COVID-19-related survey items do not total to create a scale and the items for this study were examined individually, validity and reliability were not

relevant. This is particularly true given that the survey was only administered once and will not be evaluated for test-retest reliability. While there is no calculated data on validity or reliability on the survey, assessment leaders at Bethel University have agreed with HEDS educational researchers that the items have strong face validity.

This study used three items from the 2020 Campus Life Survey with the intention of generalizing findings from the smaller sample to the larger university population (Creswell, 2009) with the goal of developing a better understanding of how synchronous instruction might relate to institutional connectedness and retention. The 2020 Campus Life Survey was an appropriate tool for data collection in this case, as it was low in cost, easily accessible by the intended participants, and it provided a streamlined and easy process for the transfer of data to data analysis software once the data is collected. A selection of the items in the survey also directly addressed the focus of this study, allowing the researcher to utilize existing data rather than re-administering a new survey shortly after the 2020 Campus Life Survey was administered.

While the 2020 Campus Life Survey was not originally designed specifically for use in this study, it was an appropriate tool to use in the discussion of this study's topics. One reason for using the existing survey data was due to the unique circumstances under which the survey was administered. As noted earlier, feedback regarding online instruction is most often available from students who prefer learning online for a variety of reasons. It is possible that students who prefer learning online experience institutional connectedness more readily and are more likely to continue coursework than a more general population of students who would not normally elect to learn online.

The other significant reason for using the existing survey data in this study was the close alignment of some survey items with the focus of the study. Because the survey was

administered with the purpose of collecting feedback that can be compared with previous years as well as more specific feedback about student experiences with learning online during COVID, there are several items in the survey that are not relevant to this study. The full survey included items that students regularly respond to about safety on campus, involvement in campus activities, academic achievement, and academic plans. Additional questions focused on the impact of COVID-19 on the student experience as well as the impact of various instructional strategies on the student experience. However, three specific survey items align directly with this study's research questions:

- 183. How many courses are you taking this semester right now (do not include courses that were only a half semester long in the first half of the semester)?
- 182. How many of your courses have met synchronously (e.g., class meets together with the instructor at the same time for a lecture or discussion) at least once since classes were moved online because of COVID-19?
- 178. How connected do you feel to Bethel?
- 179. Do you intend to return to Bethel next fall to continue and/or complete your education?

The first research question in this study sought to explore the relationship between synchronous instruction and a sense of connection to the institution. Items 182 and 178 from the 2020 Campus Life Survey directly addressed this question, allowing for a correlational study of the variables in that question. The second research question in this study examined the relationship between students' sense of connection to their university and their intention to continue coursework in the coming semester. Items 178 and 179 directly measured the variables in this question, which supported the aim of the study. Finally, the third research question in this

study investigated whether there was a relationship between synchronous instruction and students' intention to continue coursework at the university in the coming semester. Items 182 and 179 addressed the variables in this research question. Together, these three items from the 2020 Campus Life Survey supported this study's aim to explore how synchronous online instruction might impact the perception of connectedness and retention in the undergraduate, online setting.

Sampling Design

The 2020 Campus Life Survey targeted undergraduate students enrolled in the traditional undergraduate school (College of Arts and Sciences) at Bethel University in St. Paul, Minnesota during the 2019-2020 academic year. Bethel University is a medium-sized, private, Christian university in the Twin Cities area of Minnesota. The university includes traditional, undergraduate, liberal arts programs (College of Arts and Sciences) along with other programs for adults (degree completion, graduate school, and seminary). While most of the programs for adults are offered online, the College of Arts and Sciences has not historically offered many courses online on a regular basis. In all, Bethel University enrolled 4,005 students in 2019-2020 (*National Center for Education Statistics*, 2021), 2,270 of whom were enrolled in the College of Arts and Sciences at the time of this study.

At the time of the survey, students who were enrolled in the traditional programming had completed (or were completing) the remainder of their spring 2020 semester in an online format due to COVID-19 pandemic restrictions. These students began their academic year as expected, completing coursework on campus and participating in university activities. Many of them lived on campus. In the spring

semester, students began coursework as usual, attending courses on campus. However, because of rising cases of COVID-19 nationally, the university delivered the remainder of the spring semester's curriculum online. Most students moved off campus and completed their courses at a distance.

Faculty and administration at Bethel University understood that there was a possibility that the pandemic would not slow down over the summer and that instruction may have to be modified to an online or blended format again in the fall. Hoping to understand what helped students succeed while learning online in the spring, the university administered the 2020 Campus Life Survey to all students enrolled during the spring term in the university's traditional college, the College of Arts and Sciences (CAS).

Bethel University administration sent the 2020 Campus Life Survey via university email to 2,270 students. Nine hundred seventy-five students started the survey, and 957 students completed at least a portion of it (for a 42% completion rate). Students who completed the survey provided a representation of students at all years (freshman, sophomore, junior, and senior), and from a wide variety of majors. All students who completed the survey had experienced a shift in their course schedules from primarily face-to-face courses to fully online courses.

This survey sample provides a unique insight into student needs in the online environment. In many cases, student feedback about the perception of connectedness within the context of online learning is provided by students who elect to learn in an online format. Regardless of the rationale for selecting online learning, students who complete online coursework typically understand before beginning coursework that they will be interacting with others at a distance. It is possible that they enter into the online

learning process with skills or a predisposition for developing connections in the online environment, and they are not likely as disappointed by the distance setting as students who choose the face-to-face setting but must learn online anyway.

This unique perspective is important for institutions that seek to increase their online offerings even when students may not all indicate an interest in pursuing online options. As higher education continues to shift toward the online setting (or as the online modality continues to be an important strategy in managing campus health during public health crises), it is critical for faculty and campus leaders to understand how all students develop connections with the university and make decisions about continuing coursework, not just those who would elect for online learning in the first place. The students that completed the 2020 Campus Life Survey at Bethel represent many students whose input would most likely represent challenges in feeling connected with the university online rather than that of primarily online students who began coursework prepared to develop connections online.

Data Collection Procedures

Data from the 2020 Campus Life Survey is available by request from Bethel University's Office of Institutional Data and Research. To obtain this data, a researcher must write a proposal outlining the intended, specific use of the data and submit the proposal to the Institutional Review Board (IRB). The IRB's purpose is to "ensure the respectful and ethical treatment of human participants in research conducted by Bethel students and faculty or by researchers whose participants will include members of the Bethel community" (*Institutional Review Board*, 2020). The proposal will include a written description of the study, two

additional forms required by IRB, and an official letter of permission to access the data from the Office of Assessment and Accreditation.

Following IRB approval of the proposal, the researcher requested the data via email from the Institutional Data and Research team. In addition to the specific items noted above, the researcher also requested data from the demographic items on the survey (e.g., class standing, language, disability, gender, ethnicity). The Institutional Data and Research team shared only the survey items requested due to relevance to the study. The data was provided in a CSV file, and it contained all of the specific responses for each survey item, demographic items, and timestamps.

Data Analysis

To ensure that the study includes high-quality data, data was reviewed and cleansed after it was obtained. During the cleansing process, the researcher reviewed the anonymous survey responses to identify any responses that appeared incomplete. Responses that excluded any of the specific items relevant to this study indicated that a respondent did not finish the survey, and the entry was discarded due to the risk that the entries provided represented an incomplete thought or inaccuracies related to the failed survey attempt. However, responses that provided complete entries for the items listed but excluded demographic information were included in the analysis. Additionally, survey responses that appeared to have been completed in an amount of time that is insufficient for intentional completion of the items (per the completion timestamp in the file) were removed. The researcher completed data cleansing manually rather than using artificial intelligence.

Once cleansed, the data file was saved as a new file and uploaded into Statistical Package for the Social Sciences (SSPS), a software used for the analysis of quantitative analyses. The

researcher identified the variables for the hypotheses and performed statistical tests according to each hypothesis's variable types. The following table outlines the variable types and survey items for each hypothesis.

Hypothesis	**Independent Variable**	**Dependent Variable**
1. There is no relationship between synchronous online instruction and a sense of connectedness to their institution.	Percentage of courses offering synchronous online instruction (survey items 182, 183)	Strength of connectedness (survey item 178)
2. There is no relationship between a sense of connectedness to the institution and intent to continue coursework at the institution.	Strength of connectedness (survey item 178)	Likelihood of continuing coursework in future terms (survey item 179)
3. Students that participate in synchronous online instruction are equally or less likely to continue coursework in future terms.	Percentage of courses offering synchronous online instruction (survey items 182, 183)	Likelihood of continuing coursework in future terms (survey item 179)

Data analysis in this study will follow appropriate tests according to variable type. To analyze the relationship between the variables in this study and draw inferences that might be generalized, the study will lean on statistical tests selected based on the number and types of independent and dependent variables. In this study, the Spearman's Rho test will be used to analyze all primary hypotheses.

In the first hypothesis, a Spearman's Rho test showed the relationship between variables (percentage of courses offering synchronous online instruction and strength of perceived connectedness). In the second hypothesis, a Spearman's Rho test showed the relationship between variables (strength of perceived connectedness and intent to continue coursework). In the third hypothesis, a Spearman's Rho test showed the relationship between variables (number of courses offering synchronous instruction and intent to continue coursework).

To explore the relationship between various demographics and variables from the primary hypotheses, a variety of statistical tests were used due to the variety of variable types in the demographics data. Those tests included Chi-square, independent *t*-test, and Welch's test.

Limitations and Assumptions

There are some limitations to this study that are important to note. First, and quite significantly, the students who completed the survey are all enrolled in traditional undergraduate programs. The data in this study does not represent students who are completing advanced degrees or who are enrolled in degree completion programs. As such, non-traditional student data is not represented in this study. Because of the differences between life circumstances for traditional and non-traditional students, it is possible that survey responses from non-traditional students could have different outcomes.

Additionally, the survey was sent to students who are currently enrolled in the College of Arts and Sciences. If students unenrolled prior to the survey due to financial or health issues related to the COVID-19 pandemic, their responses aren't represented in this survey. As such, this survey data represents input from students who were able to participate in learning

throughout the pandemic and not from students for whom the pandemic was problematic enough to interrupt school enrollment.

Beyond these limitations, this study also acknowledges that the shift to online education for some faculty and students was more challenging due to limited familiarity or skills with the technological tools needed to teach and learn online. It is reasonable to note that in some cases, synchronous online learning had variable levels of quality and effectiveness. This study assumes comparable levels of quality across synchronous online instruction experiences, and the results of this study are limited by the fact that this is unlikely.

Additionally, the data from this survey represents the perceptions of students who, outside of the COVID-19 pandemic, would otherwise be enrolled in traditional, face-to-face courses. This is an important limitation to note, as the goals and expectations of students who prefer face-to-face instruction can differ significantly from expectations of students who prefer to learn online. However, while this factor limits the data so that it represents only those who prefer face-to-face learning, this limitation also presents an opportunity to better understand face-to-face student experiences in a time when institutions increasingly pursue online education opportunities.

Another limitation is that this survey asks students about the synchronous activity requirements for their courses, not whether they participated in those activities. This assumes that students are participating in the required activities, which may not be accurate in all cases. One consideration might be to limit the study to students who also reported that they were successful with coursework, suggesting that they had also participated in the required synchronous sessions.

Students' motivation for completing the survey could be another limitation. Students who completed the survey are those that felt most inclined to give feedback. Completing a survey is an investment of time, and it is possible that those who completed the survey are willing to make the investment due to a sense of connectedness with the institution. Students who do not feel connected to the institution may not be as highly represented in this data. To motivate students who might not otherwise participate, Bethel University administration offered an incentive for participants. Still, it is likely that the data in this survey generally represent students who are more highly invested in the university.

In addition to these limitations, it is important to remember that this survey was conducted at only one institution, which is faith-based and located in the mid-west. To generalize the results of the study beyond this setting, it would be important to repeat the study and include a wide variety of institutions from locations throughout the United States. Because this study is limited in this manner, it is important to note that results and discussion may not be generalizable beyond the specific institution where the survey was administered.

Finally, while the survey promises that student responses are anonymous, some participants may doubt that their responses are actually anonymous. In these cases, they may be inclined to respond to survey items in a way that they perceive the institution may want them to respond. This study assumes that participant responses are honest and accurate, but it is possible that there may be some inaccurate responses.

Ethical Considerations

To ensure that students understood how their data would be used, the survey explained that the purpose of the survey was to gather information about the effectiveness of instruction, satisfaction, retention, beliefs, and safety on campus. It is important to note

that the purpose of the survey, as it was communicated to students, was different from the focus of this study, which was a more specific analysis of a selected number of items.

The survey description noted that university leadership adjusts practices based on student input to remind students to respond honestly, and it identifies the time commitment required of those who engage in the survey (Creswell, 2009). To encourage participation in the survey for university purposes, faculty who administered the survey invited students to provide their email address in exchange for a $100 gift card drawing, but the survey description noted that these email addresses would be separated from actual survey responses in order to keep responses anonymous. The survey was administered at a time when students were not involved in many other surveys or completing final exams for courses, which could have reduced the students' ability to participate fully and limited the validity of the results. During the analysis of the data for this study, results will be discussed as they are found regardless of the expected reaction of an audience (Creswell, 2009).

Once obtained by the researcher, survey data will be kept confidential and protected from unauthorized access through file encrypting. Following the use of the data and completion of the study, encrypted files will be destroyed. Institutional copies of the survey data are stored by the Office of Assessment and Accreditation. Together with the Provost's Office, the Office of Assessment and Accreditation restricts data access to those who have completed the specified steps of submitting a proposal to IRB and receiving approval for the use of the data. When the data is shared, it "is de-identified, includes only the variables for the requested study, and stripped of all participant comments" (J. Frederickson, personal communication, January 18, 2021).

Anonymized data from the survey was kept confidential throughout the study. Copies of the data for the purpose of this study will be destroyed following the completion of the study. Copies of the data for the purpose of other university analysis and decision-making will be maintained and managed according to data storage practices in Bethel University's Office of Assessment and Accreditation.

Summary

While the 2020 Campus Life Survey was not designed with this study in mind, it directly addressed the research questions of this study. Through the acquisition of the existing survey data and the analysis of three items from the survey, this study described how synchronous instruction correlates with students' sense of institutional connectedness. It also described the correlation between institutional connectedness and students' intention to continue coursework at the university in the coming term.

Additionally, because the population for this survey includes students who would normally prefer to learn in a traditional, face-to-face setting, the data offered unique insight into the effectiveness of synchronous instruction for all students in the online setting rather than providing insights for only those who have elected to learn online. This is an important perspective as higher education institutions increase online programming in response to strategic growth plans and public crises. In the next chapter, this study examines survey data, outlines findings, and provides an analysis of the data using the statistical tests described in this chapter.

Chapter IV: Results

Main Hypotheses

There are three variables that are the main focus for the three hypotheses in this study: percentage of courses taught synchronously (interval scale of measurement), sense of connectedness to the institution (ordinal scale of measurement), and intent to continue coursework at the institution (ordinal scale of measurement). Given that each of the three hypotheses includes at least one ordinal scale, the Spearman's Rho correlational test was chosen to test the relationships proposed in each hypothesis.

For the intent to continue coursework variable, the graduating senior category was changed to "system missing" given that graduating seniors have no reason to return to the institution. The remaining response options were recoded so that a higher number indicates a greater likelihood of intent to return to the institution. Additionally, the "unsure" category was placed in the middle of the distribution (3), between "probably no" and "probably yes" to create an ordinal scale. See Table 1 for the original frequency distribution and Table 2 for the recoded intent to return frequency distribution.

Table 1

Frequency Distribution for the Original Intend to Return to Institution Item

Do You Intend To Return To This Institution Next Fall To Continue And/Or Complete Your Education?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely yes	520	54.3	59.8	59.8
	Probably yes	169	17.7	19.4	79.2
	Probably no	4	.4	.5	79.7
	Definitely no	19	2.0	2.2	81.8
	Unsure	29	3.0	3.3	85.2
	Not applicable because I am graduating	129	13.5	14.8	100.0
	Total	870	90.9	100.0	
Missing	System	87	9.1		
Total		957	100.0		

Table 2

Frequency Distribution for the Recoded Intend to Return to Institution Item

Do You Intend To Return To This Institution Next Fall To Continue And/Or Complete Your Education?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely not Returning	19	2.0	2.6	2.6
	Probably not Returning	4	.4	.5	3.1
	Unsure	29	3.0	3.9	7.0
	Probably Returning	169	17.7	22.8	29.8
	Definitely Returning	520	54.3	70.2	100.0
	Total	741	77.4	100.0	
Missing	System	216	22.6		
Total		957	100.0		

Hypothesis 1

The survey items utilized for the first hypotheses examined the percentage of courses that

offered synchronous online instruction and students' sense of connectedness to their institution. Those items were:

- 183. How many courses are you taking this semester right now (do not include courses that were only a half semester long in the first half of the semester)?
- 182. How many of your courses have met synchronously (e.g., class meets together with the instructor at the same time for a lecture or discussion) at least once since classes were moved online because of COVID-19?
- 178. How connected do you feel to Bethel?

A Spearman's Rho correlation was used to examine the relationship between synchronous online instruction and a sense of connectedness to their institution. There was no significant relationship between the two variables, $r_s = .004$, $p = .907$, $N = 870$. The percentage of classes that the student had synchronous online instruction was not related to their sense of connectedness to the institution.

Hypothesis 2

The survey items utilized for the second hypotheses examined students' sense of connectedness to their institution and intent to continue coursework at the institution. Those items were:

178. How connected do you feel to Bethel?

179. Do you intend to return to Bethel next fall to continue and/or complete your education?

A Spearman's Rho correlation was also used to examine the relationship between a sense of connectedness to the institution and intent to continue coursework at the institution. There was a significant positive correlation between the two variables, $r_s = .268$, $p < .001$, $N = 741$.

This means that more connected the student felt to the institution, the more likely they intended to return to the institution.

Hypothesis 3

Finally, the survey items utilized for the first hypotheses examined percentage of courses that offered synchronous online instruction and students' intent to continue coursework at the institution. Those items were:

- 183. How many courses are you taking this semester right now (do not include courses that were only a half semester long in the first half of the semester)?
- 182. How many of your courses have met synchronously (e.g., class meets together with the instructor at the same time for a lecture or discussion) at least once since classes were moved online because of COVID-19?
- 179. Do you intend to return to Bethel next fall to continue and/or complete your education?

A Spearman's Rho correlation was again used to examine the relationship between percent of synchronous online instruction and intent to continue coursework at the institution. There was no significant relationship between the two variables, $r_s = .041$, $p = .740$, $N = 740$. The percent of classes that the student had that were taught synchronously was not related to their intent to return to the institution.

Demographic Analyses

Additional analyses were conducted to examine if there were relationships between the three main variables in the study (percent of courses taught synchronously, connectedness to institution, and intent to return to institution) and six demographic variables: gender, transfer status, multilingual status, race/ethnicity, participation in intercollegiate athletics, and year in

school. Analyses are organized by each of the three main variables in the study. Given that some of the demographic variables used a nominal scale of measurement (categorical), Chi-square analyses were used much of the time to examine the relationships. This required that one of the main variables, intent to return to the institution, be recoded. As can be seen in the frequency distributions in Tables 1 and 2 presented earlier, there were only four students who chose the "probably no" category. This is too small of a cell for conducting Chi-square analyses. Because of this, the "probably no" and "definitely no" categories were combined together for these analyses. The frequency distribution for this recoded "intent to return" variable can be seen in Table 3.

Table 3

Frequency Distribution for the Recoded Intend to Return to Institution Item with Combined Category

Do You Intend To Return To This Institution Next Fall To Continue And/Or Complete Your Education?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely or Probably Not Returning	23	2.4	3.1	3.1
	Unsure	29	3.0	3.9	7.0
	Probably Returning	169	17.7	22.8	29.8
	Definitely Returning	520	54.3	70.2	100.0
	Total	741	77.4	100.0	
Missing	System	216	22.6		
Total		957	100.0		

Intent to Return to Institution

Students who identify as "transfer students," or students who enrolled at Bethel University after completing college credits at another institution, are considered to have "transfer status." A Chi-square analysis was conducted to examine the relationship between transfer status

and intent to return to the institution. There was no significant relationship between the two variables, χ^2 (3, N = 723) = 1.06, p = .787. Note that because of the low number of students who did not plan to return to the institution, there were two cells with expected frequencies below the minimum count of five. Table 4 shows that the percentages within each category are similar to one another.

Table 4

Crosstabs of Intent to Return to Institution by Transfer Status

			Do you consider yourself a transfer student?		
			Yes	No	Total
Intent to Return to this Institution	Definitely or Probably Not Returning	Count	4	18	22
		Expected Count	2.6	19.4	22.0
		%	4.7%	2.8%	3.0%
	Unsure	Count	3	26	29
		Expected Count	3.4	25.6	29.0
		%	3.5%	4.1%	4.0%
	Probably Returning	Count	18	147	165
		Expected Count	19.6	145.4	165.0
		%	20.9%	23.1%	22.8%
	Definitely Returning	Count	61	446	507
		Expected Count	60.3	446.7	507.0
		%	70.9%	70.0%	70.1%
Total		Count	86	637	723
		Expected Count	86.0	637.0	723.0
		%	100.0%	100.0%	100.0%

At the time of this study, students had been enrolled in the spring 2020 athletics as usual, but activities had been cancelled or adjusted due to pandemic. It is assumed that students who would typically enroll in athletics were still enrolled, but that their actual participation in the activities had been limited. In this survey, the number of students who indicated that they were on an athletic team represents typical enrollment numbers.

The relationship between whether or not a student was on an athletic team and their intent to return to the institution approached, but was not quite, statistically significant, χ^2 (3, N = 723) = 6.62, p = .085. Athletes (96.8%) were a little more likely to say they would probably or definitely be returning to the institution compared to non-athletes (91.8%). Note that because of the low number of students who did not plan to return to the institution, there was one cell with expected frequencies below the minimum count of five. See Table 5 for percentages.

Table 5

Crosstabs of Intent to Return to Institution by Athletic Status

			Were you an athlete on a team this academic year?		
			Yes	No	Total
Intent to Return to Institution	Definitely or Probably Not Returning	Count	2	20	22
		Expected Count	4.8	17.2	22.0
		%	1.3%	3.5%	3.0%
	Unsure	Count	3	26	29
		Expected Count	6.3	22.7	29.0
		%	1.9%	4.6%	4.0%
	Probably Returning	Count	44	121	165
		Expected Count	36.1	128.9	165.0
		%	27.8%	21.4%	22.8%
	Definitely Returning	Count	109	398	507
		Expected Count	110.8	396.2	507.0
		%	69.0%	70.4%	70.1%
Total		Count	158	565	723
		Expected Count	158.0	565.0	723.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between multilingual status and intent to return to the institution. There was no significant relationship between the two variables, χ^2 (3, N = 723) = 1.74, p = .627. Note that because of the low number of students

who did not plan to return to the institution, there were two cells with expected frequencies below the minimum count of five. Table 6 shows that the percentages within each category are similar to one another.

Table 6

Crosstabs of Intent to Return to Institution by Multilingual Status

			Are you a multilingual student?		Total
			Yes	No	
Intent to Return to this Institution	Definitely or Probably Not Returning	Count	2	20	22
		Expected Count	1.8	20.2	22.0
		%	3.4%	3.0%	3.0%
	Unsure	Count	4	25	29
		Expected Count	2.4	26.6	29.0
		%	6.8%	3.8%	4.0%
	Probably Returning	Count	15	150	165
		Expected Count	13.5	151.5	165.0
		%	25.4%	22.6%	22.8%
	Definitely Returning	Count	38	469	507
		Expected Count	41.4	465.6	507.0
		%	64.4%	70.6%	70.1%
Total		Count	59	664	723
		Expected Count	59.0	664.0	723.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between gender and intent to return to the institution. Women (72.8%) were significantly more likely to say they were definitely returning to the institution compared to men (62.4%), whereas men (31.2%) were significantly more likely to say they were probably returning to the institution compared to women (19.9%), χ^2 (3, N = 741) = 10.24, p = .017. See Table 7 for percentages within each category.

Table 7

Crosstabs of Intent to Return to Institution by Gender

			Gender		
			Female	Male	Total
Intent to Return to the Institution	Definitely or Probably Not Returning	Count	18	5	23
		Expected Count	17.1	5.9	23.0
		%	3.3%	2.6%	3.1%
	Unsure	Count	22	7	29
		Expected Count	21.6	7.4	29.0
		%	4.0%	3.7%	3.9%
	Probably Returning	Count	110	59	169
		Expected Count	125.9	43.1	169.0
		%	19.9%	31.2%	22.8%
	Definitely Returning	Count	402	118	520
		Expected Count	387.4	132.6	520.0
		%	72.8%	62.4%	70.2%
Total		Count	552	189	741
		Expected Count	552.0	189.0	741.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between the race/ethnicity of the student and intent to return to the institution. There was no significant relationship between the two variables, $\chi^2 (3, N = 733) = 2.58, p = .461$. Note that because of the smaller number of BIPOC students and small number of students who did not plan to return to the institution, there were two cells with expected frequencies below the minimum count of five. Table 8 shows that the percentages within each category are similar to one another.

Table 8

Crosstabs of Intent to Return to Institution by Race/Ethnicity

			RaceEthnicity		
			BIPOC	White	Total
Intent to Return to the Institution	Definitely or Probably Not Returning	Count	2	21	23
		Expected Count	2.8	20.2	23.0
		%	2.2%	3.3%	3.1%
	Unsure	Count	6	22	28
		Expected Count	3.4	24.6	28.0
		%	6.7%	3.4%	3.8%
	Probably Returning	Count	19	148	167
		Expected Count	20.5	146.5	167.0
		%	21.1%	23.0%	22.8%
	Definitely Returning	Count	63	452	515
		Expected Count	63.2	451.8	515.0
		%	70.0%	70.3%	70.3%
Total		Count	90	643	733
		Expected Count	90.0	643.0	733.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between year in school and intent to return to the institution. It should be noted that graduating seniors were excluded from the intent to return item. The seniors left have senior status but were not yet graduating. Seniors (81.6%) were significantly more likely to indicate that they were definitely returning compared to juniors (73.1%), sophomores (60.3%), and first-years (61.2%), χ^2 (9, N = 740) = 63.23, p < .001. Note that because of the small number of students who did not plan to return to the institution, there were two cells with expected frequencies below the minimum count of five. See Table 9 for percentages within each category.

Table 9

Crosstabs of Intent to Return to Institution by Year in School

			Year In School				Total
			First-year	Sophomore	Junior	Senior	
Intent to Return to this Institution	Definitely or Probably Not Returning	Count	13	7	3	0	23
		Expected Count	3.2	6.5	7.1	6.2	23.0
		%	12.6%	3.3%	1.3%	0.0%	3.1%
	Unsure	Count	7	12	6	4	29
		Expected Count	4.0	8.2	8.9	7.9	29.0
		%	6.8%	5.7%	2.6%	2.0%	3.9%
	Probably Returning	Count	20	64	52	33	169
		Expected Count	23.5	47.7	51.8	45.9	169.0
		%	19.4%	30.6%	22.9%	16.4%	22.8%
	Definitely Returning	Count	63	126	166	164	519
		Expected Count	72.2	146.6	159.2	141.0	519.0
		%	61.2%	60.3%	73.1%	81.6%	70.1%
Total		Count	103	209	227	201	740
		Expected Count	103.0	209.0	227.0	201.0	740.0
		%	100.0%	100.0%	100.0%	100.0%	100.0%

Connectedness to Institution

A Chi-square analysis was conducted to examine the relationship between multilingual status and how connected the student feels to the institution. There was no significant relationship between the two variables, χ^2 (3, N = 852) = 2.92, p = .404. Note that because of the small number of students who said they had no connection to the institution, there was one cell with expected frequencies below the minimum count of five. Table 10 shows that the percentages within each category are similar to one another.

Table 10

Crosstabs of Connectedness to the Institution by Multilingual Status

			Are you a multilingual student?		Total
			Yes	No	
How connected do you feel to this institution?	No connection	Count	5	38	43
		Expected Count	3.6	39.4	43.0
		%	6.9%	4.9%	5.0%
	Very little connection	Count	26	226	252
		Expected Count	21.3	230.7	252.0
		%	36.1%	29.0%	29.6%
	Some connection	Count	31	412	443
		Expected Count	37.4	405.6	443.0
		%	43.1%	52.8%	52.0%
	Very strong connection	Count	10	104	114
		Expected Count	9.6	104.4	114.0
		%	13.9%	13.3%	13.4%
Total		Count	72	780	852
		Expected Count	72.0	780.0	852.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between whether or not the student is an athlete and how connected the student feels to the institution. There was a significant relationship between the two variables, χ^2 (3, N = 852) = 16.43, p = .001. Athletes (73.9%) were more likely to say they had some connection or a very strong connection to the institution compared to non-athletes (63.3%). Note that because of the small number of students who said they had no connection to the institution, there was one cell with expected frequencies below the minimum count of five. Table 11 shows the percentages within each category.

Table 11

Crosstabs of Connectedness to the Institution by Athletic Status

			Were you an athlete on a team this academic year?		Total
			Yes	No	
How connected do you feel to this Institution?	No connection	Count	1	42	43
		Expected Count	8.7	34.3	43.0
		%	0.6%	6.2%	5.0%
	Very little connection	Count	44	208	252
		Expected Count	50.9	201.1	252.0
		%	25.6%	30.6%	29.6%
	Some connection	Count	93	350	443
		Expected Count	89.4	353.6	443.0
		%	54.1%	51.5%	52.0%
	Very strong connection	Count	34	80	114
		Expected Count	23.0	91.0	114.0
		%	19.8%	11.8%	13.4%
Total		Count	172	680	852
		Expected Count	172.0	680.0	852.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between the transfer status of the student and how connected the student feels to the institution. There was a significant relationship between the two variables, χ^2 (3, N = 852) = 10.85, p = .013. Non-transfers (67.3%) were more likely to say they had some connection or a very strong connection to the institution compared to transfers (51.4%). Table 12 shows the percentages within each category.

Table 12

Crosstabs of Connectedness to the Institution by Transfer Status

			Do you consider yourself a transfer student?		Total
			Yes	No	
How connected do you feel to this Institution?	No connection	Count	9	34	43
		Expected Count	5.2	37.8	43.0
		%	8.7%	4.5%	5.0%
	Very little connection	Count	41	211	252
		Expected Count	30.5	221.5	252.0
		%	39.8%	28.2%	29.6%
	Some connection	Count	43	400	443
		Expected Count	53.6	389.4	443.0
		%	41.7%	53.4%	52.0%
	Very strong connection	Count	10	104	114
		Expected Count	13.8	100.2	114.0
		%	9.7%	13.9%	13.4%
Total		Count	103	749	852
		Expected Count	103.0	749.0	852.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between gender and how connected the student feels to the institution. Though men (70.4%) were more likely to say they had some connection or a very strong connection to the institution compared to women (63.6%), the relationship was not quite statistically significant, χ^2 (3, N = 870) = 6.03, p = .110. Table 13 shows the percentages within each category.

Table 13

Crosstabs of Connectedness to the Institution by Gender

			Gender		
			Female	Male	Total
How connected do you feel to this Institution?	No connection	Count	36	9	45
		Expected Count	33.7	11.3	45.0
		%	5.5%	4.1%	5.2%
	Very little connection	Count	201	56	257
		Expected Count	192.3	64.7	257.0
		%	30.9%	25.6%	29.5%
	Some connection	Count	337	116	453
		Expected Count	339.0	114.0	453.0
		%	51.8%	53.0%	52.1%
	Very strong connection	Count	77	38	115
		Expected Count	86.1	28.9	115.0
		%	11.8%	17.4%	13.2%
Total		Count	651	219	870
		Expected Count	651.0	219.0	870.0
		%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between year in school and how connected the student feels to the institution. There was no significant relationship between the two variables, χ^2 (9, N = 869) = 9.35, p = .405. Table 14 shows that the percentages within each category are similar to one another.

Table 14

Crosstabs of Connectedness to the Institution by Year in School

			Year In School				Total
			First-year	Sopho-more	Junior	Senior	
How connected do you feel to this institution?	No connection	Count	9	12	12	12	45
		Expected Count	5.4	10.8	11.8	17.0	45.0
		%	8.7%	5.7%	5.3%	3.6%	5.2%
	Very little connection	Count	31	55	71	99	256
		Expected Count	30.6	61.6	66.9	96.9	256.0
		%	29.8%	26.3%	31.3%	30.1%	29.5%
	Some connection	Count	50	119	108	176	453
		Expected Count	54.2	108.9	118.3	171.5	453.0
		%	48.1%	56.9%	47.6%	53.5%	52.1%
	Very strong connection	Count	14	23	36	42	115
		Expected Count	13.8	27.7	30.0	43.5	115.0
		%	13.5%	11.0%	15.9%	12.8%	13.2%
Total		Count	104	209	227	329	869
		Expected Count	104.0	209.0	227.0	329.0	869.0
		%	100.0%	100.0%	100.0%	100.0%	100.0%

A Chi-square analysis was conducted to examine the relationship between the race/ethnicity of the student and how connected the student feels to the institution. Because of the smaller number of students of color at the institution, this comparison is between BIPOC students and white students. There was no significant relationship between the two variables, χ^2 (3, N = 858) = 0.611, p = .894. Table 15 shows that the percentages within each category are similar to one another.

Table 15

Crosstabs of Connectedness to the Institution by Race/Ethnicity

			Race/Ethnicity		
			BIPOC	White	Total
How connected do you feel to this Institution?	No connection	Count	7	36	43
		Expected Count	5.4	37.6	43.0
		%	6.5%	4.8%	5.0%
	Very little connection	Count	31	225	256
		Expected Count	31.9	224.1	256.0
		%	29.0%	30.0%	29.8%
	Some connection	Count	55	391	446
		Expected Count	55.6	390.4	446.0
		%	51.4%	52.1%	52.0%
	Very strong connection	Count	14	99	113
		Expected Count	14.1	98.9	113.0
		%	13.1%	13.2%	13.2%
Total		Count	107	751	858
		Expected Count	107.0	751.0	858.0
		%	100.0%	100.0%	100.0%

Percentage of Courses Taught Synchronously

An independent *t*-test was used to compare gender with the percent of courses students had that were taught synchronously. There was not a significant difference between the groups, $t(940) = 0.553$, $p = .581$. See Table 16 for descriptive statistics.

Table 16

Descriptive Statistics for Percent of Courses Taught Synchronously by Gender

	Gender	N	Mean	Std. Deviation
Percent of Synchronous Courses	Female	702	.4208	.34441
	Male	240	.4347	.30947

An independent *t*-test was used to compare race/ethnicity with the percent of courses

students had that were taught synchronously. There was not a significant difference between the groups, t (925) = 0.807, p = .420. See Table 17 for descriptive statistics.

Table 17

Descriptive Statistics for Percent of Courses Taught Synchronously by Race/Ethnicity

	Race/Ethnicity	N	Mean	Std. Deviation
Percent of Synchronous Courses	BIPOC	115	.4480	.30822
	White	812	.4209	.34073

An independent *t*-test was used to compare transfer status with the percent of courses students had that were taught synchronously. There was not a significant difference between the groups, t (850) = 0.934, p = .351. See Table 18 for descriptive statistics.

Table 18

Descriptive Statistics for Percent of Courses Taught Synchronously by Transfer Status

	Do you consider yourself a transfer student?	N	Mean	Std. Deviation
Percent of Synchronous Courses	Yes	104	.4003	.29527
	No	748	.4334	.34381

An independent *t*-test was used to compare athletes versus non-athletes with the percent of courses students had that were taught synchronously. There was not a significant difference between the groups, t (850) = 0.51, p = .610. See Table 19 for descriptive statistics.

Table 19

Descriptive Statistics for Percent of Courses Taught Synchronously by Athletic Status

	Were you an athlete on a Bethel team this academic year?	N	Mean	Std. Deviation
Percent of Synchronous Courses	Yes	171	.4175	.45494
	No	681	.4323	.30236

An independent *t*-test was used to compare multilingual status with the percent of courses students had that were taught synchronously. There was not a significant difference between the groups, t (850) = 0.847, p = .397. See Table 20 for descriptive statistics.

Table 20

Descriptive Statistics for Percent of Courses Taught Synchronously by Multilingual Status

	Are you a multilingual student?	N	Mean	Std. Deviation
Percent of Synchronous Courses	Yes	73	.4614	.31598
	No	779	.4263	.34033

Welch's test was used to compare year in school with the percent of courses students had that were taught synchronously. Welch's test was used instead of the traditional one-way ANOVA because Levene's test revealed that the homogeneity of variances assumption was violated, F (3, 937) = 5.496, p = .001. Welch's test is robust even with heterogeneous variances. There was a significant difference between the groups, F(3, 409.51) = 36.67, p < .001. Least Significant Difference (LSD) post hoc tests revealed that seniors (M = .524, SD = .304) were significantly more likely to have their courses taught synchronously compared to juniors (M = .45, SD = .412), sophomores (M = .326, SD = .25), and first-years (M = .265, SD = .271). The post hoc tests also revealed that all other groups were significantly different from one another, as well, except for sophomores versus first-years. See Table 21 for descriptive statistics and Table 22 for post hoc tests.

Table 21

Descriptive Statistics for Percent of Courses Taught Synchronously by Year in School

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
First-year	118	.2650	.27090	.02494	.2156	.3144
Sophomore	223	.3256	.25016	.01675	.2925	.3586
Junior	248	.4497	.41217	.02617	.3981	.5012
Senior	352	.5238	.30494	.01625	.4919	.5558
Total	941	.4248	.33564	.01094	.4034	.4463

Table 22

LSD Post Hoc Tests for Percent of Courses Taught Synchronously by Year in School

Dependent Variable: Percent Synchronous Courses
LSD

(I) Year In School	(J) Year In School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
First-year	Sophomore	-.06059	.03664	.099	-.1325	.0113
	Junior	-.18469*	.03600	.000	-.2553	-.1140
	Senior	-.25884*	.03424	.000	-.3260	-.1916
Sophomore	First-year	.06059	.03664	.099	-.0113	.1325
	Junior	-.12410*	.02970	.000	-.1824	-.0658
	Senior	-.19826*	.02755	.000	-.2523	-.1442
Junior	First-year	.18469*	.03600	.000	.1140	.2553
	Sophomore	.12410*	.02970	.000	.0658	.1824
	Senior	-.07415*	.02669	.006	-.1265	-.0218
Senior	First-year	.25884*	.03424	.000	.1916	.3260
	Sophomore	.19826*	.02755	.000	.1442	.2523
	Junior	.07415*	.02669	.006	.0218	.1265

*. The mean difference is significant at the 0.05 level.

Chapter V: Discussion, Implications, Recommendations

Overview of the Study

While they have grown significantly in prevalence over the past two decades, online programs experience challenges with enrollment and retention (Allen & Seaman, 2017; Bawa, 2016). This is a challenge partly due to the overall decline of enrollment in higher education as a whole, but it is also a problem that is uniquely challenging for online programs that are competing not only with local schools but with schools across the country. Institutional connectedness is a relatively new concept in higher education, and institutions are just beginning to understand its significance. Historically, institutions have instinctively fostered institutional connection for students through on-campus activities and dorm life. However, community-building experiences are not as readily available in the online setting, and the strategies colleges have tried so far have not been as helpful as hoped (Glazer & Wanstreet, 2011; Rovai et al., 2005). This disconnection with others in the online environment can cause a perception of isolation for students who might rely on those experiences to feel connected (Villanueva et al., 2020). Because of this challenge with institutional connectedness, institutions will likely continue to struggle with retention at the same rate unless they can identify and implement effective strategies that support institutional connectedness.

This challenge was of particular concern during the COVID-19 pandemic in 2020, during which most institutions transitioned learning from a face-to-face modality to online. In response to the closing of their campuses, institutions scrambled to replace face-to-face learning with online learning, and in many cases, this included required synchronous online instruction (Quezada, 2020). While research had demonstrated previously that students who elect online learning formats are more likely to continue coursework if they have a sense of institutional connectedness, it was not clear if this would be true for students who originally

chose campus-based, face-to-face learning. Additionally, while institutions hoped that the synchronous online institution format would support a sense of connectedness and eventually retention, it was unclear if this instructional approach would actually yield those results.

The purpose of the research in this study was to investigate the relationship among synchronous online instruction, institutional connectedness, and intent to continue coursework (retention). Research previous to this study had demonstrated a positive correlation between institutional connectedness and retention in online programs (Wilson et al., 2020), but that research focused on students who chose to learn online (and may only represent the perspective of students who naturally experience a sense of connection in the online environment). Exploring these relationships during the COVID-19 pandemic allowed this study to determine if the same relationship exists in the online setting even for students who did not choose online learning on their own. This unique understanding can help institutions develop strategies about how to design synchronous learning, foster institutional connectedness, and support retention for all students.

Research Questions

This study sought to answer questions about the relationship among synchronous online instruction, institutional connectedness, and retention in higher education within the online learning context. To explore these relationships, the study focused on the following questions:

1. What is the relationship between synchronous online instruction and a sense of connection to the institution?
2. What is the relationship between a sense of connection to the institution and intent to continue coursework at the institution?

3. What is the relationship between synchronous online instruction and intent to continue coursework at the institution?

In response to these questions, the researcher hypothesized the following:

Synchronous instruction and institutional connectedness

$H1_O$: There is no relationship between synchronous online instruction and a sense of connectedness to their institution.

$H1_A$: There is a relationship between synchronous online instruction and a sense of connectedness to their institution.

Institutional connectedness and retention

$H2_O$: There is no relationship between a sense of connectedness to the institution and intent to continue coursework at the institution.

$H2_A$: There is a relationship between sense of connectedness to the institution and intent to continue coursework at the institution.

Synchronous instruction and retention

$H3_O$: Students that participate in synchronous online instruction are equally or less likely to continue coursework in future terms.

$H3_A$: Students that participate in synchronous online instruction are more likely to continue coursework in future terms.

These were important questions to answer (and hypotheses to test) because of the demand for enrollment and retention. Additionally, these are helpful to explore because of the prevalence of synchronous instruction in higher education particularly as a result of the COVID-19 pandemic. As institutions adjust instructional approaches in an attempt to keep students engaged and learning, it will be important and helpful to understand the benefits of synchronous instruction, which was a common strategy in 2020.

Conclusions

In the context where the survey was administered (Bethel University), this study rejected one null hypothesis and failed to reject two null hypotheses. Beyond the null hypotheses tested, this study also analyzed the primary hypothesis variables along with six key demographics (i.e., gender, race/ethnicity, transfer status, year in school, multilingual status, and participation in athletics). This additional analysis yielded important information that may help to further illustrate the findings on the original hypotheses.

Hypothesis findings.

The data showed that the first analysis (i.e., synchronous online instruction and a sense of institutional connectedness) failed to reject the null hypothesis. This means that there is no significant relationship between synchronous online instruction and students' perception of connectedness to their institution. This finding may be surprising to some academic leaders because of recent research that has shown synchronous offerings to correlate with a reduced sense of isolation in students (Quezada, 2020). However, it is important to remember that a student's sense of isolation is not specifically institutional connectedness; it reflects a perception of proximity (or lack thereof) with other individuals at the institution, or social connectedness, rather than a sense of proximity or connection with the institution as a whole.

Social connection is an important part of the educational experience, but it does not always clearly relate positively to retention because students' peer groups in the online setting may change from course to course. Furthermore, it is possible that in circumstances where technology presents challenges for the students or instructors, synchronous instruction may decrease the sense of proximity that students experience with others and with their institution (Villanueva et al., 2020). The findings of this study indicate that in the case of Bethel University's traditional, undergraduate students, synchronous online instruction neither increased nor decreased students' sense of proximity with the institution.

The data showed that the second null hypothesis (i.e., sense of institutional connectedness and intent to continue coursework) was rejected. This means that even for students who didn't choose online learning intentionally, there is a significant, positive correlation between the two variables and that students who report a sense of institutional connectedness are also more likely to have intentions to continue coursework at the institution. This likely will not come as a surprise to educators, as recent studies have shown a clear relationship between institutional connectedness and retention (Glazer & Wanstreet, 2011). This is an important conclusion because it underscores the importance of efforts at helping students feel connected to the institution as a whole rather than limiting efforts to increasing social connections with other individuals.

Finally, the data showed that the third null hypothesis (i.e., synchronous instruction and intent to continue coursework) failed to be rejected. This means that there is no relationship between synchronous online instruction and students' intent to continue coursework in future terms. Similar to the findings in the first hypothesis, this may be surprising to some academic leaders. In the scramble to compete for enrollment and retention, synchronous online

instruction has risen to the top of the list of strategies institutions hope will keep students engaged enough to complete coursework. This is particularly true in the COVID-19 pandemic timeframe, when traditional institutions converted instruction from the face-to-face modality to online, leaning on synchronous technologies like Zoom and Google Meet to emulate the in-class experience (Quezada, 2020). However, despite the hope that emulating face-to-face experiences would provide students with the motivation to continue coursework, this study reveals that synchronous online instruction neither positively nor negatively correlates with persistence.

Demographic findings.

All in all, this study showed that synchronous online instructional approaches might not be the solution institutions were hoping for. At least for traditional college students, synchronous online instruction was not a sure pathway to increased institutional connectedness or retention. However, despite the lack of relationship between synchronous instruction and the other variables (institutional connectedness and intent to continue coursework at the institution), this study reiterates earlier findings about a positive relationship between institutional connectedness and intent to continue coursework at the institution. Furthermore, the study highlights some demographic details that illustrate additional opportunities and challenges in relation to institutional connectedness and retention in the online setting.

In some cases, demographics appear to correlate positively with each variable. For example, in this study, the data showed that the female student gender correlated with a stronger expression of intent to continue coursework. This means that while males expressed they would likely return for coursework, females more commonly expressed a stronger

certainty that they would return, a similar finding to Adams's 2018 study on the perception of connectedness and retention for female transfer students.

Likewise, the data showed that higher numbers of years in school correlated positively with an increased intention to continue coursework at Bethel. For example, students with the most years in school (seniors who were not graduating) indicated the highest level of intent to continue over juniors, and juniors expressed a significantly higher level of intent to continue than sophomores and freshmen. This could be due to the perception of nearing graduation and the complications that arise when transferring late in the college career.

Interestingly, while not statistically significant, students who participated in athletics reported an intent to continue coursework at higher rates than those who do not participate in athletics. This is particularly interesting to note during a year when many sports activities were suspended due to the pandemic, meaning that many students who responded that they are involved in athletics are referring to past or anticipated involvement rather than current involvement. This could suggest that simple association with extracurricular clubs or activities, even if present participation in a face-to-face environment is not possible, can support student retention. It might also suggest that student involvement in extracurricular activities (such as athletics) makes a lasting impact on retention, even in years when participation is not possible.

While the relationship between athletic involvement and intent to continue coursework is not significant, athletic involvement does clearly correlate positively with a student's sense of connectedness to the institution. This aligns with recent research on the relationship between athletics and connection, and it is documented in the K-12 school system as well as in higher education (Martinez, Coker, McMahon, Cohen, & Thapa, 2016; Matthews, 2017).

Involvement in athletics is not unique in its correlation with institutional connectedness; transfer status correlates with connectedness, as well. In this study, students who identified as a "transfer student" expressed a lower level of connectedness with the institution than those who did not identify as transfer students. This is similar to the findings of a 2018 dissertation exploring the experiences of female students who transferred to UCLA (Adams, 2018). In the 2018 dissertation, Adams described the challenge that transfer students had with institutional connectedness and discussed exploring strategies for increasing the student's sense of loyalty to the institution.

In general, the findings of this study indicate that while synchronous online instruction did not correlate positively with increased institutional connectedness or retention, there was a positive relationship between a student's perception of their connection to the institution and their intent to continue coursework (retention). This suggests that for institutions that hope to increase retention, synchronous online instruction may not be the solution. However, finding other ways to increase institutional connectedness may be a solution. Furthermore, there may be key demographic opportunities and challenges to consider when developing institutional connectedness strategies (particularly in the online environment).

Implications for Practice

The analysis for the data collected in this study yielded results that can have implications for higher education institutions. These implications are important for colleges and universities that aim to support retention in the coming years as enrollment becomes increasingly challenging.

Synchronous online instruction.

First, it should be noted that this study focused only on synchronous online instruction from the perspective of institutional connectedness and retention. Synchronous instruction is not always utilized in a course for this reason; often, there is a curricular strategy at work in the decision to offer synchronous instruction online. This study set the curricular strategy aside and examines only the relationship between synchronous work, connectedness with the institution, and retention. There are likely benefits to synchronous instruction outside of this discussion, and it is important for institutions to consider all aspects of the synchronous instruction.

That said, in regard to connectedness and retention, institutions should understand that although it is a strategy that appears to replicate face-to-face experiences for students, synchronous instruction is not a reliable pathway to increased institutional connectedness or retention. There is some research that suggests incorporating synchronous instruction in an environment where students elected to learn online decreases a sense of social isolation in some circumstances (Quezada, 2020). However, this present study shows that there is no significant relationship between synchronous online instruction and retention. Likewise, there is no significant relationship between synchronous online instruction and a student's sense of connectedness with the institution as a whole.

This understanding is critical for institutions wrestling with enrollment challenges that create financial shortfalls in the university budget; if a university needs to prioritize tools that support retention, tools for synchronous online instruction may not rise to the top of the strategic options. This is a particularly important discussion for institutions that may struggle to support synchronous learning technologically, as synchronous instruction has been shown to

actually increase the perception of isolation in students when the synchronous sessions do not go as smoothly as planned (Villanueva et al., 2020). In these cases, it is possible that the institutions that focus significant resources around synchronous online instruction but do not properly structure or support those activities might be spending resources on a strategy that could negatively impact the university's goals in the end.

While this study suggests that synchronous online instruction does not support retention or connectedness goals, it is important to note that this may only be true of some university students. Participants in this study were undergraduate students at a face-to-face, traditional college who had enrolled in a university with the expectation that they would learn and develop a sense of connection on campus. The findings of this study describe the perceptions of students who are learning online but would otherwise have chosen to learn in a traditional setting, and they do not describe the perceptions of students who prefer to learn primarily online. It is important to continue investigating these topics in a variety of settings and with a variety of student groups, including traditional students, after the impact of COVID-19 is minimized.

Institutions that opt to incorporate synchronous online instruction should also be careful in how those activities are designed. Knowing that synchronous activities can increase a sense of isolation in cases where the technology is problematic, or the logistics are challenging, those activities should be designed with the student experience in mind. This could include (but is not limited to) lowering the stakes on synchronous activities (or offering them as optional rather than required), designing activities that encourage interaction among participants, providing multiple sessions at different times so students can select an option that

works best for them, and offering technological resources (tutorials, technology support) for students and faculty who may struggle to participate successfully in the activities.

Institutional Connectedness.

Synchronous online learning is not a reliable strategy for online programs that are seeking to help students feel connected and continue completing coursework, but finding ways to increase institutional connectedness is a worthwhile endeavor for universities that ultimately seek to support retention. Given the positive correlation between institutional connectedness and retention, it is critical for institutions to identify and pursue strategies outside of synchronous instruction to foster students' connection with their university.

While not central to the focus of this study, the data suggested that one avenue for supporting institutional connectedness through student involvement may be in extracurricular activities (particularly athletics). Involvement in these activities encourages students to perceive themselves as an important part of the larger institution and reinforces their reliance on the institution as a whole for experiences beyond academics. This could include on-campus opportunities for those who are local and online options for all students.

This study's data also suggested that another avenue for supporting institutional connectedness might relate to students who identify as transfer students. Due to the significant negative correlation between students who identified as transfer students and the perception of institutional connectedness, it would be worthwhile for institutions to investigate new ways to help transfer students specifically feel connected to their institution. This could include invitations to special events, opportunities to lead, activities that allow students to meet others, and even providing the student with items to wear or use that are marked with the university logo. Ironically, students who transfer into an institution after completing a portion of their

coursework elsewhere will naturally have less exposure to these strategies at the institution over time than students who completed their entire academic career in one place. Institutions that intend to utilize activities like these with the goal of increasing institutional connectedness for transfer students could consider specifically pursuing transfer student participation with the goal of increasing participation in that student population over a shorter span of time. While this was not a central concept of the study, it is an important area of exploration for institutions that seek to support connectedness.

Supporting retention.

This study indicated that synchronous online instruction does not correlate positively with retention, but it did show a positive relationship between institutional connectedness and retention. However, while this positive relationship is important to understand, it is important to remember that institutional connectedness is not the only vehicle for supporting retention.

The data in this study suggested that along with those who experience institutional connectedness, female students and students who have completed more years of school express a high likelihood of continuing in coursework at the institution. This suggests that institutions might be wise to focus on strategies for students who are not as likely to continue course work. Male students and students in the earlier years of college may benefit from institutional efforts that encourage and incentivize course continuation. This could include leadership opportunities, vouchers for the campus store, invitations to special events, and mentorship opportunities that help students who are less likely to persist connect with those who are more likely to persist.

Keeping in mind the positive relationship between institutional connectedness and retention, male students and students in earlier years of college may also benefit from efforts

that foster institutional connectedness. This includes opportunities through the institution and actions on behalf of the institution that helps students perceive themselves as an important part of the institution as a whole, as well as opportunities to encourage the student to reflect on the importance and relevance of the institution in their own life. Some examples of strategies could include involvement in leadership opportunities or institutional communications about student successes, mentorship programs, participation in whole-institution rallies or events, and opportunities to give feedback to leadership on the university experience.

Recommendations for Future Research

As with any research, this study highlighted some additional areas in which research would be beneficial. Some of these areas arise as a result of the limitations of this study, and others arise because of the data revealed in the study. The future directions of research recommended here highlight areas that seem most relevant to online education in the higher education context.

First and foremost, it would be wise to replicate this study at a time that is not impacted by the COVID-19 pandemic. As mentioned previously, it feels ironic to study the perception of institutional connectedness at a time when people are experiencing connection in new ways and reshaping their understanding of connection in the first place. Repeating this survey outside of the pandemic crisis would allow researchers to observe themes in institutional connectedness and retention, especially as it relates to online coursework. Institutional connectedness is still an important topic during the pandemic, and studying connection at this time allows educators to understand the connection needs of all students rather than those who choose to learn online. While this is a very specific lens for exploring institutional connectedness, higher education institutions are increasingly providing online courses (and

students are faced increasingly with online offerings); this perspective on connection offers a unique value as schools and all of their students navigate the challenges of higher education in the 21st century.

This study gathered information from traditional undergraduate students. When repeating this study outside of pandemic times, it will be important to ensure that a study includes non-traditional learners. Online education is more prevalent in non-traditional higher education programs because non-traditional students are more likely to choose to learn online than traditional undergraduate students are. It will be important to understand what factors influence connection and retention for all students (both traditional and non-traditional) in order for institutions to strategically adjust their support and academic offerings to meet the needs of their specific student body. It would be ideal to include multiple institutions in this study with the goal of learning about students in a variety of institutional settings.

Previous research (Villanueva et al., 2020) has suggested that technological challenges can interfere with students' perceptions of the benefit of synchronous online learning, especially as it relates to a sense of isolation or connection. Future research on the topic of synchronous learning and a sense of connectedness could investigate the relationship between student and instructor fluency in synchronous online instruction and the students' sense of connection or isolation. It could be important to clarify in this study whether the sense of connection in question is a connection with particular individuals or with the institution, as those constructs differ greatly and may impact the study's implications.

Finally, it is important to recognize the importance of the demographic data this study gathered and consider what the next steps with that data might be. The demographic data in this study offered important insight into additional factors, outside of the hypothesis variables

that can impact the hypotheses independently. One important area of exploration is the impact of extracurricular involvement on connectedness and retention in higher education. Studies in this area could investigate whether the type of activity, number of activities, success in activities, or duration of activities correlate with a stronger connection and higher likelihood to continue coursework. An additional area of important exploration is transfer status. Research in this area could explore strategies institutions might employ in an attempt to mitigate the negative relationship between transfer status and institutional connectedness.

Concluding Comments

In an attempt to further explore students' sense of connectedness with a higher education institution in the online setting, the research in this dissertation has largely investigated the relationship between synchronous online instruction, institutional connectedness, and intent to continue course work (retention). While the study did not identify a significant relationship between synchronous instruction and institutional connectedness or retention, the data did reveal that institutional connectedness has a significant positive relationship with retention. This suggests that institutions that hope to raise retention rates may find success in doing so by focusing on strategies (other than synchronous online learning) that increase their students' sense of connectedness to the institution.

Finally, this study also identified some key demographic factors that appear to positively correlate with institutional connectedness and retention. While institutions cannot control the demographic factors of their student populations, they may be able to better understand how those factors impact connectedness and retention so they can adjust programming to better support students. Programming that supports students who are less

likely to continue, especially through strategies that foster institutional connectedness, is a great starting point.

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BETHEL UNIVERSITY

Kara Wicklund <k-wicklund@bethel.edu> Fwd: Bethel in MN using Student Survey

Joel Frederickson <frejoe@bethel.edu> Tue, Jan 19, 2021 at 8:46 AM To: Kara Wicklund <k-wicklund@bethel.edu>

---------- Forwarded message ---------
From: **Nicole Seidler** <nicole.seidler@hedsconsortium.org>
Date: Mon, Apr 27, 2020 at 1:40 PM
Subject: Re: Bethel in MN using Student Survey
To: Joel Frederickson <frejoe@bethel.edu>

Hi Joel,

Thank you so much for reaching out and letting me know. We hope the survey is a bright spot amidst the current pandemic.

Best,
Nicole

Nicole Seidler
HEDS Research Analyst & Data Manager
https://www.hedsconsortium.org
765-361-6381

On Mon, Apr 27, 2020 at 2:34 PM Joel Frederickson <frejoe@bethel.edu> wrote:

Dear Nicole

We thank HEDS for allowing institutions to use their COVID Surveys for internal purposes. We at Bethel University (St. Paul, MN) plan to adapt part of the student survey for internal purposes only. We will cite © 2020 Higher Education Data Sharing Consortium for those items.

Please let me know if you need anything else from us at Bethel.

Sincerely,

Joel

--
Joel Frederickson, Ph.D. | Professor | Psychology Department
Associate Dean of Institutional Assessment & Accreditation | AC343F
Bethel University | 3900 Bethel Drive, St. Paul, MN 55112 | 651-638-6317

Appendix B

2020 Campus Life Survey (Survey Items Used)

- 183. How many courses are you taking this semester right now (do not include courses that were only a half semester long in the first half of the semester)?
- 182. How many of your courses have met synchronously (e.g., class meets together with the instructor at the same time for a lecture or discussion) at least once since classes were moved online because of COVID-19?
- 178. How connected do you feel to Bethel?
- 179. Do you intend to return to Bethel next fall to continue and/or complete your education?