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## Student Interactions, Connectedness, and Retention in an Online MBA Program: An Exploratory Study

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STUDENT INTERACTIONS, CONNECTEDNESS, AND RETENTION IN AN  
ONLINE MBA PROGRAM: AN EXPLORATORY STUDY

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A Dissertation

Presented to

The Faculty of the School of Education  
The College of William and Mary in Virginia

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In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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by

Karen G. Conner

February 2019

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ONLINE MBA PROGRAM: AN EXPLORATORY STUDY

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## **Dedication**

In loving memory and in honor of my wonderful parents who instilled in me a strong work ethic and the value of education. Thank you. I miss you dearly. I hope I have made you proud.

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## **Abstract**

The market for online education is competitive, especially for graduate programs such as the Master of Business Administration (MBA). Attrition rates vary widely, and educators must understand the needs of online students and create engaging quality programs to be competitive. Social interaction and student connectedness are particularly important in online MBA programs where one of the expected benefits is the opportunity for students to build strong professional networks. This mixed methods study explores the student interactions, connectedness, and retention in the Online MBA Program at William & Mary. While previous research has explored building community in an online educational environment, a gap remains in the literature regarding the quality and type of student connections in a part-time online graduate program tailored to working professionals. In addition to surveying faculty who taught in the program, I attempted to survey all students of the program and used the results of the Online Student Connectedness Survey (Bolliger & Inan, 2012) to inform the student participant selection process for the qualitative case study. Rooted in the social constructivist paradigm, I created the Online Student Connectedness conceptual framework and sought to determine the extent to which students and alumni of the program felt connected. I also wanted to determine what the students' experiences of connectedness were and the quality of those connections. The results of the quantitative survey revealed a moderately high perception of connectedness among students in the program. The results of the qualitative data indicated that several factors influenced the students' experiences of connectedness. In addition to carefully planned collaborative and group work, a feeling of comfort and perception of community were key factors. Managing students' expectations, support



from others, and connection to the institution contributed positively to the high retention rate enjoyed by the program. The results of the study offer a number of implications for practice that may be beneficial to program administrators, professors, course developers, instructional designers, and to students. Through appropriate application of social constructivist theory and adult learning theory, educators can create learning activities that promote student connectedness and thereby, increase student satisfaction and retention rates.

STUDENT INTERACTIONS, CONNECTEDNESS, AND RETENTION IN AN  
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## **Chapter One**

Demand in the higher education market continues to shift as it chases equilibrium, and educators struggle to take advantage of new opportunities to meet students' needs. While the Online Master of Business Administration (OMBA) market grew between 2015 and 2017 (Graduate Management Admission Council [GMAC], 2017), it has now stabilized overall; but over the past year, more OMBA programs reported declining application volumes (58%) than those that reported growth (36%) (GMAC, 2018). Overall enrollments in higher education (Seaman, Allen, & Seaman, 2018) and retention rates for online courses (Bawa, 2016) have not fared as well; they continue to decline. With overall enrollments shrinking and the OMBA market at least stable for now, educators must look for new opportunities. On a positive note, as of Fall 2016, enrollments in distance education courses increased steadily each year from 2012 to 2016 for both the undergraduate and graduate level (Seaman et al., 2018), offering new opportunities for educators who are willing to teach online. Twenty percent of the OMBA programs surveyed expected growth in the number of students who receive employer sponsorships (GMAC, 2017). With the anticipated growth in employer sponsorships and the shift in applications that has caused some programs to experience gains while others have suffered losses, it is likely that the OMBA market will remain competitive as students look for quality programs. One measure considered an important indicator of

program quality is attrition rates (Gabrielle, 2001). Thus, educators must learn how to develop and teach courses in ways that improve online student satisfaction and retention rates.

### **Problem Statement**

With an increasing number of students who desire online courses, it is essential that educators understand the needs of online students to ensure the quality of their programs and to remain competitive in the online space. Reported attrition rates in online learning varied between 20-80% and were a major challenge for many who taught online (Rostaminezhad, Mozayani, Norozi, & Iziy, 2013). Two factors, social interaction (Boston et al., 2009) and student satisfaction of course delivery (Weber & Farmer, 2012) were found to be especially important for retaining students in distance education (see “Definition of Terms” for further explanation). Social interaction helps students to build community and offers opportunities for students to support one another. Research suggested a positive correlation between a sense of community or student connectedness and perceived learning engagement and course satisfaction (Liu, Magjuka, Bonk, & Lee, 2007).

Student connectedness is particularly critical in an OMBA program where an expected benefit of the program is the professional network that results from connecting and building relationships with other working professionals. Ninety percent of the prospective students interviewed in the Flex (part-time, evening) MBA Program at the William & Mary Raymond A. Mason School of Business indicated that one of the main reasons for pursuing their MBA was a desire to cultivate a professional network (K. R. Mallory, personal communication, January 31, 2018). Both online and traditional face-to-

face MBA students who are working professionals may wish to move up in their organization or transition to a new job, and a strong professional network can help them do that. It may appear to be relatively easy to meet fellow students and build those professional networks in traditional face-to-face programs where students come together in the same physical space. However, it is also quite possible to build equally effective professional networks in an online environment. While previous studies have focused on building community in a digital learning environment (Conrad, 2005; Liu et al., 2007; Shackelford & Maxwell, 2012), there is a gap in the literature with regard to student connectedness as it relates to a part-time OMBA program tailored to working professionals and the type and quality of those connections should they exist.

### Conceptual Framework

For this study, I used a conceptual framework which I referred to as the Online Student Connectedness conceptual framework (see Figure 1).

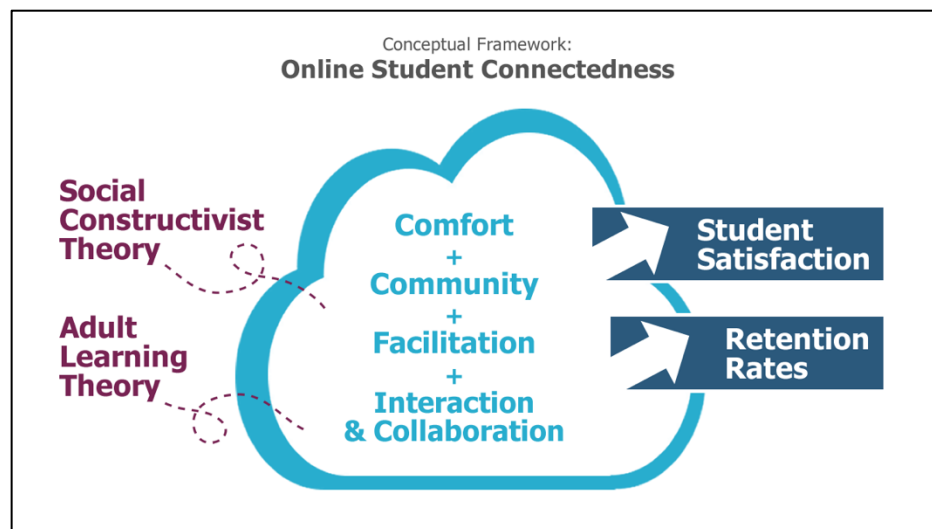


Figure 1. Online Student Connectedness conceptual framework. Adapted from “Development and Validation of the Online Student Connectedness Survey (OSCS)” by D. U. Bolliger and F. A. Inan, 2012, *The International Review of Research in Open and Distributed Learning*, 13, p. 41. CC BY 3.0. Adapted with permission.

Central to the framework was student connectedness and its four factors from the Online Student Connectedness Survey: (a) comfort, (b) community, (c) facilitation, and (d) interaction and collaboration (Bolliger & Inan, 2012). Social constructivist theory (Dewey, 1938; Palloff & Pratt, 2007; Piaget, 1969; Rovai, 2004; Vygotsky, 1978, 1986) and adult learning theory (Knowles, 1992; Knowles, Holton, & Swanson, 2015) when applied appropriately can positively influence the four factors and foster online student connectedness.

As students connect and begin to develop a sense of community, three positive outcomes might emerge: (a) greater student satisfaction, (b) higher retention rates, and (c) improved learning outcomes. Retention rates correlated positively with the students' perceived level of social presence and the quality of interactions and feedback to the students (Ivankova & Stick, 2007; LaBarbera, 2013; Rovai, 2002). Research by Arbaugh (2010) suggested that collaborative learning in online courses had a positive impact on learning outcomes while another study showed a positive relationship between a sense of community and perceived learning engagement, learning outcomes, and course satisfaction in an OMBA program (Liu et al., 2007)

### **Research Questions**

Through applying adult learning theory and using teaching strategies that helped build online community and connectedness among students, this study sought to answer the following research questions:

- 1) To what extent do current students and did alumni feel connected in their Online MBA Program at William & Mary?

- 2) What were the students' experiences of connectedness and the quality of those connections?
  - a. What in the students' experience of those learning activities were consequential to them that made them feel connected?
  - b. How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?
  - c. How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program?

### **Significance of the Study**

Student satisfaction is considered one of the five pillars of quality online education, and one of the best indicators of student satisfaction in online learning is a program's retention rates (Lorenzo & Moore, 2002). Institutions that can increase student satisfaction and maintain high retention rates in the highly competitive OMBA market are more likely to be perceived as having quality programs. While some traditional and OMBA programs were struggling with enrollments, 36% of OMBA programs reported an increase in applications (GMAC, 2018). Regardless of whether applications are up or down for a particular business school, with the competition in the OMBA market, educators must look for strategies to retain their enrolled students.

Often faculty were hesitant to teach online because they were uncertain of how to design and teach online courses, and they were not yet comfortable teaching in the online space (Keengwe & Kidd, 2010). The techniques and strategies that faculty used

successfully in the traditional face-to-face classroom may not have translated well to the online environment (Chiasson, Terras, & Smart, 2015). As demand for face-to-face and online offerings shift in the higher education market, educators must prepare to meet the needs of the 21st-century student. Perceived online program quality, student satisfaction, and retention rates are more likely to improve within an institution as educators create programs and deliver courses that foster online student connectedness and help students build community. The results of this study offer several considerations for how faculty members and program administrators can positively influence student connectedness in an OMBA program. Learning from the successful practices within one program will contribute to the knowledge base to assist the field to improve.

### **Definition of Terms**

For the purposes of this research, I consider the terms “adjunct professor,” “course facilitator,” “educator,” “faculty member,” “instructor,” “professor,” and “teacher” to all be college educators as they have a similar level of interaction with students. Participants used those terms (with the exception of “educator”) during the interview process. The following are additional terms and definitions used in this research.

*Connected:* “having social, professional, or commercial relationships”  
(Connected, 2019)

*Distance education:* “education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or



asynchronously” (National Center for Education Statistics [NCES], 2017, p. 8). In this research, “distance education” and “online education” are synonymous.

*Executive partners:* A network of active, semi-retired, and retired senior business executives unique to the Raymond A. Mason School of Business community who work with and mentor students, sharing their business expertise across a range of industries and in every functional area. Almost one-third have international career experience (Executive Partners, 2019).

*Learning management system:* “a software application that automates the administration, tracking, and reporting of training events” (Ellis, 2009). In this document, “learning management system,” “online learning environment,” and “Canvas” are used interchangeably.

*Master teacher:* the instructor of record for a particular course in the OMBA Program. The master teacher may or may not facilitate the course but supervises the section leader/s who facilitate and grade one or more sections of the course in which the master teacher is the instructor of record.

*Residency:* a requirement of the OMBA Program where students come to campus for one weekend during their two-year program. They expand their knowledge during the Friday-Sunday events that include speakers and offer team-building activities and networking functions. They meet their cohort peers and faculty face-to-face and grow their professional network.

*Retention rate:* a measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelor’s (or equivalent) degree-seeking undergraduates from

the previous fall who are again enrolled in the current fall. For all other institutions, this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall (NCES, 2017).

*Section leader:* An instructor who facilitates and grades one or more sections of a course in the OMBA Program and who is supervised by a master teacher.

*Student connectedness:* Students have a sense of inclusion and a feeling of belonging to the program group (including faculty, fellow students, program staff, and the university), where group members care about one another, support one another, and share the common goal of supporting students as they pursue their degrees.

*Satisfaction:* “the perception of enjoyment and accomplishment in the learning environment” (Sweeney & Ingram, 2001, p. 57)

*Wicked problem:* A concept woven throughout the OMBA coursework where students choose to apply what they learn to solve a complex problem of their choice (William & Mary Online MBA, n.d.).

## **Conclusion**

In this chapter, I have established the challenges that institutions of higher education currently face with the dynamics of a changing market, particularly in online education, and the role that student connectedness may play in satisfaction and retention rates in OMBA programs. I outlined the conceptual framework for this study, the research questions that drove the study, and listed the terms and definitions that I used. In the next chapter, I explore the theoretical basis of the study and the existing literature as it

relates to social constructivism, adult learning theory, and OMBA students who are working professionals.

## **Chapter Two: Review of Literature**

As I explored online student connectedness and how MBA students made meaning in a predominantly asynchronous learning environment, I examined two theories that helped to support the development of community and foster connectedness in adult learners: social constructivist theory (Dewey, 1938; Palloff & Pratt, 2007; Piaget, 1969; Rovai, 2004; Vygotsky, 1978, 1986) and adult learning theory (Knowles, 1992; Knowles et al., 2015). Rooted primarily in social constructivism, this study considered social presence as it relates to teachers and learners and how it influences the building of community and student connectedness in an online learning environment. I also considered the importance of the andragogical model and adult learning theory and their influence in the design and creation of effective adult learning environments.

### **Social Constructivist Theory**

Social constructivist theory purports that students learn from each other and make meaning through social interaction. The origins of social constructivism lie in the works of Piaget (1969) and Vygotsky (1978) who suggested that learning was an active process involving the construction of knowledge rather than acquiring it. In applying a social constructivist lens, students were viewed as peer educators who contributed to the learning experience by sharing their valuable experiences and diverse expertise (Rovai, 2004). John Dewey (1938) emphasized the importance of making connections between

lived experiences and learning. Social constructivist theory aligns well with the MBA academic experience where students seek to develop professional networks to learn from others and support their careers. Whereas the traditional, teacher-centered didactic methods of teaching have the educator exercising an authoritative role, social constructivist theory is more student-centered and broadens the range of people from whom the student might learn.

**Social presence.** The concept of social presence originated in the work of Short, Williams, and Christie (1976) who focused initially on the quality of the communication medium between two people. As the concept evolved, later researchers such as Gunawardena (1995) examined how people used and adapted to the communication medium. Social presence is now considered to be the ability to present oneself as a real human-being in an online environment (Picciano, 2002; Richardson & Swan, 2003; Rovai & Barnum, 2003) and is a critical component in building online community (Palloff & Pratt, 2007). Research has suggested that social presence was positively correlated with increased student satisfaction and improved retention rates and learning outcomes (Liu et al., 2007).

Although social constructivism encourages student-centered learning, online instructors can positively influence students' perception of interpersonal interactions, student motivation, satisfaction, and learning outcomes by practicing immediacy and helping to bridge the psychological and physical gap between student and instructor in the online space (Schutt, Allen, & Laumakis, 2009). Immediacy refers to the perceived physical and psychological closeness between individuals (Mehrabian, 1967). The instructor played a critical role in the student's perception and satisfaction of a course

(Schutt et al., 2009). Gallien and Oomen-Early (2008) suggested that students performed better academically and were better satisfied when they received personalized feedback from the instructor rather than collective feedback. However, their research did not indicate that students who received personalized feedback perceived that they were more connected to the professor than those who received collective or group feedback (Gallien & Oomen-Early, 2008).

An earlier study by Korenman and Wyatt (1996) suggested that personal interactions contributed to the development of a public personae within the online environment and helped to create a “sense of community” among group members. Kim, Glassman, and Williams (2015) further indicated that student connectedness positively influenced a blog-centered, web-infused course, showing a highly significant correlation between connectedness and the students’ motivation to share knowledge. The greater the students’ perception of connectedness, the greater the likelihood that they would share knowledge. “When developers are creating online educational platforms they need to take into account strategies and technologies that increase both the social space and possibilities for shared, interest driven, goal directed activities” (Kim et al., 2015, p. 341). Similarly, LaBarbera (2013) recommended that online course designers consider student satisfaction when developing courses and provide opportunities for social interaction within the online learning environment in an effort to increase student connectedness.

**Community of inquiry.** The Community of Inquiry theoretical framework (Garrison, Anderson, & Archer, 2000) offered three interdependent elements that worked together to create meaningful collaborative learning experiences for students: (a) cognitive presence, (b) social presence, and (c) teaching presence (see Figure 2). The goal

of the framework was to “define, describe and measure the elements of a collaborative and worthwhile educational experience” (Garrison, Anderson & Archer, 2010, p. 6). In addition to outlining the three core elements (social, cognitive, and teaching presences), the framework was a process model that also outlined the dynamics of working collaboratively in an online environment (Garrison et al., 2010).

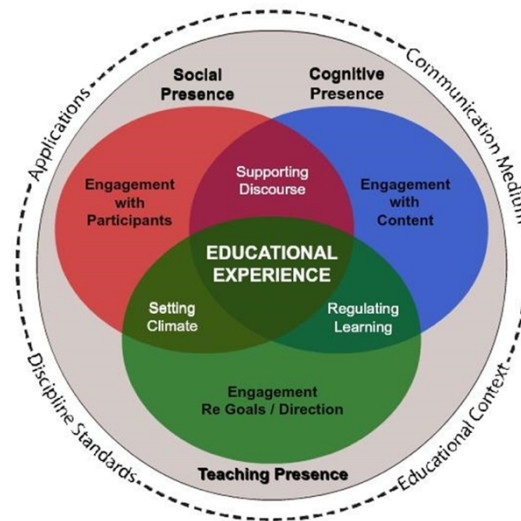


Figure 2. Community of Inquiry theoretical framework. Reprinted from *Thinking Collaboratively: Learning in a Community of Inquiry*, by D. R. Garrison, 2016, p. 59, New York, NY: Routledge. Copyright 2016 by Taylor & Francis. Reprinted with permission.

The most basic element of the Community of Inquiry framework is cognitive presence which refers to the extent to which members of the community can make meaning through sustained communication. It is an important element in critical thinking which is often considered the goal of higher education. Social presence and teaching presence complete the three elements of the framework. Encapsulating the design of the educational experience and how the experience is facilitated, teaching presence supports and enhances social and cognitive presence to achieve the desired educational outcomes (Garrison et al., 2000).

**Professional networking and communities of practice.** An important component of any MBA program is the network that can develop as students connect with and learn from one another. One of the main reasons students pursue an MBA is to gain the benefit of a professional network (Princeton Review, n.d.), and it is often a factor in program choice. More than 80% of professionals think that networking is important to the success of their careers (LinkedIn Corporate Communications Team, 2017). In 2016, of those professionals who were hired by a company, 70% already had a connection there.

MBA students have rich and varied experiences and in sharing those with their classmates, they provide additional opportunities for learning. Students may share their experiences as they work collaboratively. Studies indicated that in online courses, collaborative work improved learning outcomes (Arbaugh, 2010). The online learning environment should be designed in ways that students have opportunities to share their experiences, connect, and learn from one another.

**Interactions: Quality and type.** Interactions among students do little to promote connectedness and foster community if they lack quality. Several studies have focused on student connectedness and fostering online community, and many studies have explored student interactions with group work in discussion fora and other collaborative assignments (e.g., Barbarick, 2013; Bull, 2016; Koh, & Hill, 2009; Oliphant & Branch-Mueller, 2016; Rovai & Barnum, 2003; Waltonen-Moore, Stuart, Newton, Oswald, & Varonis, 2006). Few, if any, studies have examined interaction types and the resulting quality of those interactions that are required for completing group projects with varying levels of intensity.



Slagter van Tryon and Bishop (2009) proposed a framework for systematic course design to enhance the development of group social structure and online student connectedness. They suggested that instructors design interactions that allow for observation of dynamic social behaviors and provide more interactions that offer opportunities for observing individuating social characteristics among students. While their framework proposed strategies for fostering community and increasing student connectedness, it did not consider the quality of the connections that might stem from those interactions nor their level of intensity.

High-quality connections have three characteristics. They result in a feeling of positive regard (where people observe the best in us), of mutuality (feeling that the person is responding to and open to us), and of vitality (feeling energized by the connection; Dutton & Heaphy, 2016). By developing high-quality connections, employees can increase opportunities for growth and learning, both within their organization and outside of their professional life. The connections may not be lengthy; and according to Dutton and Heaphy (2016), they may not endure. However, they can lead to increased learning and growth (Dutton & Heaphy, 2016) whether they are fostered within a professional organization or are developed within an online educational experience.

The type of interaction that transpires between two people may influence the quality of that interaction. Thompson (1967) outlined three types of interdependence that described the intensity of interactions within organizations: (a) pooled, (b) serial, and (c) reciprocal. Pooled interactions within groups require less interaction among members than do serial or reciprocal. With pooled interactions, group members are likely to work

independently, accomplishing their goals without interacting extensively with others. Serial interactions may require a bit more interaction among group members than do pooled. As one group member completes a task, she then passes the project to the next person in sequence; and then that person completes his portion of the project, passes it to the next person, and so forth. Reciprocal interactions typically require more interaction than do serial or pooled interactions and are often needed to complete complex or ambiguous projects (Thompson, 1967).

Sharbrough and Fekula (2014) created experiential activities as teambuilding exercises for MBA students and included an exercise of loading and firing a canon. While the loading of the canon required serial interactions among team members, the safety aspect of the activity required reciprocal interactions among members. Reciprocal interdependence created the need for trust as all members were responsible for the safety of the group and could stop the loading or firing process at any time.

Despite reciprocal interdependence having been closely tied to project complexity since it was originally defined by Thompson (1967), Skilton, Forsyth, and White (2008) sought to decouple project complexity from reciprocal interaction in their study. Although Skilton et al.'s (2008) study suggested that while it is more likely that complex projects will require reciprocal interaction, they purport that reciprocal interaction can also happen when the project tasks can be divided easily. The study was limited, however, by the confounding of project complexity and the age and experience of the subjects. If indeed reciprocal interdependence varies wildly within a team and has little to do with project complexity as Skilton et al. (2008) purport, then the online environment

will offer opportunities for students to engage in all types of interactions, including reciprocal, as course developers design group projects.

**Online student connectedness.** Online student connectedness takes time to evolve, but four factors can positively influence the perception of connectedness in the online learning environment: (a) comfort, (b) community, (c) facilitation, and (d) interaction and collaboration (Bolliger & Inan, 2012). As students work together, struggle with new material, work through conflict, and make meaning by learning new ways to learn, coalescence happens which fosters student connectedness and learning community (Palloff & Pratt, 2007). Some academic programs create a “shared ordeal,” particularly within cohorts, where students work through challenges together or support each other in what might be considered a rite of passage (Howey & Zimpher, 1989). Sharing an ordeal, whether face-to-face or online, can help to foster student connectedness among those who persevere and succeed in their endeavors.

Within the online environment, however, use of online components alone will not guarantee student connectedness. A study by Oguz and Poole (2013) of online student connectedness and employment indicated that students who had a high degree (75-99%) of online components in their educational program but had limited face-to-face interaction with only weekend-long meetings or hybrid courses did not develop a sense of community that supported them emotionally and professionally and sustained them during their educational experience and beyond graduation. This speaks to the challenges of developing online community and a need to understand the factors that influence it.

As one of the four factors that contribute to online student connectedness (Bolliger & Inan, 2012), comfort relates to the student’s feeling of ease in expressing

herself, communicating with others, asking for help, and feeling safe in the online environment. If students are comfortable and feel safe in the learning environment, they are more likely to interact with instructors and peers and less likely to miss learning opportunities (Shin, 2003). Community is related to the student feeling emotionally attached to other students, spending time with peers, getting to know others, and the student feeling that others depend on her. Instructors facilitate the course and foster connectedness by integrating collaborative tools into online course activities, promoting interaction and collaboration between students, participating in online discussions, being responsive, and offering frequent feedback. Lastly, Bolliger and Inan (2012) suggested that online student connectedness was promoted by the students relating their work to others' work, discussing ideas with other students, collaborating and working with others, and sharing information with other students.

As students collaborate and share information, they inevitably make social connections. These might be considered high-quality or low-quality connections. Dutton and Heaphy (2016) purported that high-quality connections at work helped individuals to broaden their thinking and absorb knowledge more quickly. High-quality connections induce feelings of positive regard, mutuality, and vitality while low-quality connections produce feelings of inadequacy, defensiveness, and lack of safety. High-quality connections often elicit positive emotions, but they can also elicit negative emotions such as frustration or anger. More importantly, high-quality connections foster growth and development, are able to withstand setbacks and are a safe place for expressing new and creative ideas (Dutton & Heaphy, 2016).

## **Adult Learning Theories and Working Professionals**

Adults learners who are working professionals have different needs than do children, teenagers, undergraduate, or full-time graduate students. Adult learning theory has six core principles: (a) Adults prefer to know the what, how, and why they need to learn about a topic before they learn it, (b) As learners mature and become adults, they increasingly become self-directed in their learning and accept more responsibility for their learning, (c) As they grow, their experiences become a rich learning resource, (d) They are open to learning when the need arises and when learning is applicable to the task or problem at hand, (e) As adults learn, they tend to be task or problem-centered and learn better when learning is organized around their life experiences, and (f) Although adults respond to extrinsic motivators for learning, intrinsic motivators are more powerful as they grow and develop (Knowles et al., 2015).

**Course design.** Equipped with knowledge of the factors that influence students' intentions to collaborate in the online environment, course developers can design appropriate means for students to manage group projects (Cheng, 2017) and consequently further promote online student connectedness. By considering Bolliger and Inan's (2012) four factors that influence student connectedness, course developers can create learning activities that promote comfort and foster community while providing opportunities for collaboration. Thoughtful consideration of the types of interdependence (pooled, serial, and reciprocal) in collaborative interactions as outlined by Thompson (1967) may help course developers as they create group assignments that can potentially promote constructivist learning, online student connectedness, and building of community. The different types of interdependence in collaborative interactions may influence the quality

of connections made. While Dutton and Heaphy (2016) suggested that connections could result from a brief encounter and may not necessarily endure; in this study, I considered the influence of high-quality connections, regardless of duration, on perceived online student connectedness, satisfaction, and retention.

**Facilitation.** In addition to course design, course facilitation plays an important role in how quickly and how well online community develops. As facilitation is one of the subscales for measuring online student connectedness (Bolliger & Inan, 2012), instructors can use it in ways that promote collaboration and interaction between students. Additionally, being responsive to questions and offering frequent feedback are two ways instructors can develop online presence and support students in their learning through the facilitation of their course.

### **Related Theories: Social Network, Student Engagement, and Connectivism**

This study was rooted in the social constructivist paradigm and considered adult learning theory as it related to working professionals, but three other theories are worthy of mention: social network theory, student engagement theory, and connectivism. Although the three theories have similar elements to social constructivism, I did not use them as a basis for this study. Regarding social network theory, a network is often considered a cast of actors or nodes linked by a certain set of ties (such as friendship) that form a structure of interconnected ties. It is characterized by the ties that “interconnect through shared end points to form paths that indirectly link nodes that are not directly tied” (Borgatti & Halgin, 2011, p. 1169). While social network theory considers the interconnection of actors within the network, this study focused on social constructivism, student connectedness, and the building of online community.

Student engagement theory considers how much time and effort students devote to learning activities such as thinking, talking, and interacting with course content and others in the course (Dixson, 2015). The National Survey of Student Engagement focuses on the entire collegiate experience and how the institution deploys its resources to support academic learning (About NSSE, 2019). While it focuses on how undergraduates spend their time at college, this study considered student connectedness in an online graduate program.

Lastly, connectivism (Siemens, 2005), described as a learning theory for the digital age, emphasizes the role of technology in the learning process by connecting specialized nodes or sources of information. It also recognizes that learning may reside in non-human devices. In comparison, technology plays a less prominent role in social constructivism. While this study recognized technology as a vehicle that online students used to connect with others, it did not view technology in the same manner as connectivism where connections between people and databases or other information sources may be important for learning. Rather, this study, rooted in social constructivism, considered the development of online social presence and its influence on student connectedness and building community in an online learning environment where students often made meaning through social interaction.

## **Conclusion**

As online learning continues to be an important sector in adult education and in particular OMBA programs, educators must understand how to use technology effectively and design courses that meet the needs of the 21st century. A number of studies have examined online learning and social constructivist theory (Joyner, Fuller,

Holzweiss, Henderson, & Young, 2014; Liu et al., 2007; Rovai & Barnum, 2003; Shackelford & Maxwell, 2012; Su, Bonk, Magjuka, Liu, & Lee, 2005), but a gap remains in the literature about the types of interdependence required in collaborative interactions online, the potential quality of connections that result from those interactions, and the influences that instructors may have in creating opportunities for those interactions to foster online student connectedness and promote high-quality connections as defined by Dutton and Heaphy (2016). This study sought to measure online student connectedness in an OMBA Program that enjoyed a high retention rate, and it sought to explore from the students' perspectives how student connectedness influenced their program satisfaction and desire to persist in the program. In the next chapter, I describe the methodology I used to answer the research questions for this study.



### **Chapter Three: Method**

The purpose of this study was to determine the extent to which student connectedness existed in the Online MBA (OMBA) Program at William & Mary; participants' perceptions of the experiences that were consequential in creating any connections among students, alumni, and faculty within the program; and the perceived quality of those connections.

#### **Research Questions**

This study was driven by the following research questions:

- 1) To what extent do current students and did alumni feel connected in their Online MBA Program at William & Mary?
- 2) What were the students' experiences of connectedness and the quality of those connections?
  - a. What in the students' experience of those learning activities were consequential to them that made them feel connected?
  - b. How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?
  - c. How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program?

## **Study Design**

This mixed-methods study employed a quantitative survey to aid in the selection of participants for a qualitative case study. Using the validated Online Student Connectedness Survey (OSCS; Bolliger & Inan, 2012), I measured the perceived level of connectedness among current students with other students, with faculty, and any alumni whom they may have interacted with. I also measured the perceived level of connectedness among OMBA alumni, the students and alumni with whom they interacted with while in the program, and faculty. I developed six survey items which I added to the end of the OSCS and used all survey items for screening applicants who wished to participate in the interviews. The six additional items also informed the interview questions. This qualitative case study was bound in the OMBA Program which launched in 2015 at William & Mary and sought to answer the research questions outlined above.

**Participants.** Participants in this study consisted of students and alumni of the program, including those who did not persist, and faculty who were teaching or who had previously taught in the program. I invited all students and alumni of the OMBA Program at William & Mary to participate in the quantitative portion of the study and complete a 31-item survey. I asked the faculty to complete a 16-item survey. I also asked each respondent to indicate whether they wished to be considered as a candidate to participate in the qualitative case study.

The survey for faculty and the survey for students and alumni informed the selection process for the qualitative portion of this study. After reviewing the results of the survey for students and alumni, I chose 10 respondents who indicated that they wished to participate in the qualitative case study and who formed a sample which

included responses across the continuums (least-, moderately-, most-connected) of perceived level of connectedness, inclination to leave a course and/or the program, overall program satisfaction, and importance of developing a professional network. In selecting participants for the qualitative portion of the study, I first looked for a representative group with scores across the continuum of least-, moderately-, and most-connected levels of connectedness. I intended to interview 10 participants initially and select two or three participants who represented each level of connectedness scores (least-, moderately-, most-connected). Within the group of 10, I also wished to include at least two or three participants who scored two or higher on Question #27 regarding whether they had considered leaving a course or the program. I chose three participants who scored two and one participant who scored five which indicated that he had left the program.

Lastly, as I made my final participant selections, I considered scores regarding overall program satisfaction and importance of developing a professional network as I wished to include a variety of scores (low, medium, high) on those two dimensions. However, my first priority was to include an even distribution of connectedness scores (least-, moderately-, and most-connected) and to include two or three participants who had considered leaving the program. My intention was to initially interview 10 participants. If new information or additional questions had emerged from those interviews that warranted further analysis, I would have considered interviewing an additional 10 participants. However, I found the data from the initial 10 interviews sufficient for this case study.

In addition to the responses to the faculty survey, the student and alumni interviews informed the faculty selection process. Early in the data collection process, I began to record my reflections in a reflexive journal. In doing so, I had the opportunity to further process the data (Bazeley, 2014). A few faculty members and courses stood out in the interviews as exceptional in promoting student connectedness. My reflections regarding the students' comments about their courses helped to inform my selection of faculty to interview.

I invited four faculty members who were willing to participate in the qualitative portion of the study. They represented two hard skill courses (courses that are easy to quantify such as *Accounting*, *Business Analytics*, or *Finance*) and two soft skill courses (courses that require less tangible interpersonal skills such as *Leadership* or *Organizational Behavior*). The four faculty members also formed a sample across the continuum (least-, moderately-, most-connected) of perceived level of student connectedness within their courses based on the 5-point Likert scale survey. As I reviewed the data to determine which students to invite to participate in the qualitative portion of the study, I also considered those who had extreme responses on each of the four subscales of the OSCS. For example, I wished to interview a diverse group of students that included those with high and low scores within the range for perceptions of comfort in the program in an attempt to understand which activities or course structures helped to create a safe environment where students were comfortable expressing themselves. Conversely, I wished to understand what contributed to a student's feeling of discomfort and/or unwillingness to express opinions or ask for help. In considering the four OSCS subscales, I averaged the individual's 5-point Likert scores for each subscale

and applied the ranges of *low*, *medium*, and *high* for each subscale of the faculty and student surveys.

**Data sources.** Using the quantitative data from the OSCS (Bolliger & Inan, 2012), the 16-item survey for faculty, and the qualitative data from participant interviews, I sought to answer the above research questions. The online survey for students and alumni included 31 items, of which 25 items came from the OSCS (Bolliger & Inan, 2012). Similarly, I invited faculty who were teaching or who had taught in the program to respond to a 16-item survey, of which most items mimicked those from the OSCS but reworded from the faculty's perspective. For example, I reworded item #19 on the OSCS from: "I receive frequent feedback from my online instructors" to: "I give frequent feedback to my online students" (see Appendix A for the 16-item faculty survey).

***Online Student Connectedness Survey (OSCS).*** I used the OSCS developed by Bolliger and Inan (2012) which is considered a reliable ( $\alpha = .98$ ) and valid measure of perceived online student connectedness. In examining construct validity, Bolliger and Inan (2012) used confirmatory factor analysis with oblim rotation which revealed four dimensions resulting in eigenvalues of greater than 1. The four factors explained 83.95% of the variance. Their survey consisted of 25 items and the four factors or subscales: comfort (eight items), community (six items), facilitation (six items), and interaction and collaboration (five items). Each item was rated using a 5-point Likert scale ranging from 1 to 5 (*strongly disagree* to *strongly agree*). (Please see Appendix B for the OSCS items and the complete survey.) Sample items from the OSCS included:

- "I feel comfortable expressing my opinions and feelings in online courses."
- "I feel that students in my online courses depend on me."

In addition to the 25 OSCS items, I asked respondents to complete six items that measured perceived importance of developing a professional network, overall program satisfaction, and retention. The six items included:

1. Overall, how satisfied or dissatisfied are you with the Online MBA Program?  
(Extremely dissatisfied, somewhat dissatisfied, neither dissatisfied nor satisfied, somewhat satisfied, extremely satisfied)
2. Have you considered leaving a course or the program? If so, how often have you considered it?  
(Never or almost never, sometimes, about half the time, most of the time, I have left a course or the program)  
(If left the program) What was your reason for leaving the program?
3. How important or unimportant to you is developing a professional network within the Online MBA Program?  
(Not at all, slightly, moderately, very, or extremely important)
4. To what extent did you consider attending William & Mary as an undergraduate student?
  - a. I did not consider attending William & Mary as an undergraduate
  - b. I considered but did NOT attend William & Mary as an undergraduate
  - c. I attended William & Mary as an undergraduate
5. Are you willing to participate in a one-hour personal online or in-person interview (and possibly one 20-minute follow-up interview) with the researcher at a time that is mutually convenient for you to further explore your perceptions of the Online MBA Program? If you are chosen to participate and agree to be interviewed, you will receive a \$30 Amazon gift card as a token of appreciation.  
(Yes/No)
6. Please share any additional information that might be helpful regarding how you connect or do not connect with other students, professors, and staff in the Online MBA Program and how collaborative work influences your satisfaction or dissatisfaction in the program.

Questions #1, #2, and #3 above aided in the selection of participants for the interview process as I looked for a diverse sample of students across the continuums as explained in the “Participants” section above. The first three questions also informed the semi-structured interview questions, allowing me to frame questions more specifically to each student. For example, if I knew that a student was very dissatisfied with the program, I mentioned that they indicated on the survey that they were dissatisfied with the program and asked: “What has contributed most to your dissatisfaction in the program?” The data from the quantitative survey helped streamline the interview process. Question #4 above also aided in the selection process as I intended to give preference to those students who did not attend William & Mary as an undergraduate since they would have a connection to the university prior to enrolling in the OMBA Program. Question #5 was necessary to determine who would be interested in participating in the second phase of the research study, the interview process. Lastly, Question #6 was an open-ended question that allowed respondents to express any additional thoughts or concerns that were not covered in other portions of the survey.

***Qualitative interview protocol.*** The students, alumni, and faculty who were invited and who agreed to be part of the study participated in individual 1-hour initial interviews, and students and alumni also participated in a follow-up interview of approximately 20 minutes. I conducted the interviews via Zoom, a video conferencing platform, or by telephone if the participant preferred. To reduce bias, I attempted to appear naïve about the topic as I interviewed the participants and allowed them to express in their own words their perceptions of the topic (Yin, 2014). Guided by the responses to the 31-item survey, I first conducted semi-structured initial interviews with students and

alumni which informed the faculty selection process. I asked participants what had influenced their perception of each subscale within the program. For example, I asked participants what features or activities within the program contributed to their perception of comfort. (Please see Appendix C for the interview protocol for students and alumni.)

I then interviewed four faculty members individually in one-hour interviews. All of the faculty interviews were in-person, and I used Zoom and Audacity to record the conversations. The 16-item survey which faculty completed prior to the interview informed their interview questions. Lastly, the faculty interviews informed the questions for the students' follow-up interviews which I conducted last. (Please see Appendix D for the interview protocol for faculty.)

*Document analysis and faculty interviews.* I reviewed assignments (but not submissions) in four of the OMBA courses and asked faculty to identify group assignments that they considered to be complex and/or ambiguous and that might require frequent or high levels of interactions among group members. I also asked them to identify more straightforward assignments that might require fewer interactions. This allowed me to understand the assignments where complexity might have driven the intensity of interactions required of students as they collaborated to complete group assignments. For example, I attempted to identify the types of group assignments that required either pooled, serial, or reciprocal interactions as described by Thompson (1967) and made note of how the assignment design might have influenced the type of group interdependence needed to successfully complete the assignment.

I was aware that some assignments may have evolved since the launch of the program as faculty had updated their courses. However, my intention was to understand



the different structures of assignments where students collaborated with one another rather than work individually. Instead of looking for identical assignments, I was interested in the common characteristics among assignments, including those with components that required different types of interactions (pooled, serial, or reciprocal). The information was helpful as I interviewed the participants and learned more about how students interacted with each other and with faculty as they worked to complete their assignments. I also considered how the different types of interactions may have influenced the quality of connections made between students and students, and students and faculty.

**Data collection.** After receiving approval to conduct the research study from the Education Internal Review Committee (EDIRC) of William & Mary, I asked the OMBA Program Office to provide me with a list of all students and alumni of the program, including those who did not persist in the program, their gender, number of courses completed, and geographic location. I also requested a list of faculty members (master teachers and section leaders) who had taught in the program and the name and number of courses that they had taught. Using a panel within Qualtrics, an online survey tool, I emailed approximately 300 students who were enrolled in the program and approximately 100 alumni who had graduated and invited them to participate in a confidential online survey. I also invited those students who had participated in the program but who did not persist. Additionally, I emailed the faculty members using a Qualtrics panel and invited them to participate in a confidential online survey regarding the courses they were teaching or had taught in the OMBA Program. I sent two

reminders, one week apart, from within Qualtrics to the faculty members, alumni, and students who had not yet completed the survey.

On the introductory page of each survey, I explained the purposes of the study, that participation was voluntary, and that responses would remain confidential. I then indicated that choosing “Yes” on the first page of the survey constituted informed consent. At the end of the survey, I asked the respondent to indicate whether they would like to be considered as a candidate to participate in the second phase of the research study which would include personal interviews with myself. The students or alumni respondents who desired to participate and who were chosen for interviews were to receive a \$30 Amazon gift card as a token of appreciation. However, one participant requested a gift card from the William & Mary bookstore instead, and another requested a William & Mary branded t-shirt of equal value, to which I complied.

With the exception of two students who preferred to speak by telephone, all student and alumni interviews were recorded using the video-conferencing platform, Zoom. I also used Audacity to capture the audio recording for all interviews. I recorded all faculty interviews in-person, also using Zoom and Audacity. During the transcription process, I first imported each audio file into Descript, an automatic transcription application which generated a transcript of the interview. I also imported each audio file into ExpressScribe, a transcription software application that allowed me to listen to the audio file and start and stop as needed using a foot pedal. While listening to the audio file using the ExpressScribe software, I simultaneously edited and corrected the previously (automatically) transcribed document within the Descript application. Once I had completed the editing process, I reviewed the transcript for accuracy by listening to the

entire audio file a second time, making any final corrections. Lastly, I imported the text file into Dedoose, an online application for analyzing qualitative and mixed-methods research.

**Data analysis.** As I collected data for this study, I created a chronology of events and chain of evidence (Yin, 2014), organized the qualitative data within Dedoose, captured my reflections in a reflexive journal (Bazeley, 2014), and prepared the quantitative data for analysis. Using the data from the 31-item survey for students and alumni, I performed descriptive analysis, calculating the mean, median, and mode, standard deviation, and the minimum and maximum values of the OSCS and its subscales. As I analyzed the data from the OSCS and its subscales, I calculated the average score for connectedness by averaging the responses to Questions 1-25 of the OSCS for each survey respondent. I calculated the respondent’s average for each subscale by averaging the responses to the relevant questions: Questions 1-8 for comfort, Questions 9-14 for community, Questions 15-20 for facilitation, and Questions 21-25 for interaction. Table 1 shows the low, medium, and high ranges for the subscale averages.

Table 1

*Ranges for Average Subscale Scores for Students and Alumni*

| <b>Low</b>       | <b>Medium</b>     | <b>High</b>      |
|------------------|-------------------|------------------|
| >=1.00 and <2.33 | >=2.33 and <=3.67 | >3.67 and <=5.00 |

I realized after the initial interviews with students that my original calculations for the ranges for average subscale scores were incorrect. Rather than using four as the dividend and dividing by three to calculate the ranges from the 5-point Likert scale, I had

used five as the dividend to calculate the low, medium, and high ranges for the subscales. Consequently, I had told two students during their initial interviews that their subscale averages for comfort and facilitation were either high or low when I should have reported that they were in the medium range. I gave the two students the corrected information during their follow-up interviews. Neither student seemed concerned, and the error appeared to be inconsequential to the study.

In addition to analyzing the data from the student and alumni surveys, I performed a similar descriptive analysis using data from the 16-item survey offered to faculty. I calculated the respondent's average for each subscale by averaging the responses to the relevant questions for each. I calculated the average connectedness score by averaging the responses to Questions 1-13.

During the data analysis stage, I used Yin's (2014) four principles of data collection: (a) collecting multiple sources of evidence, (b) creating a case study database, (c) establishing a chain of evidence, and (d) exercising care with data from electronic resources. I collected data from students and faculty to gain the perspectives of both groups. Using Dedoose, I created a case study database, and I established a chain of evidence that increased the reliability of the study. Lastly, I used care as I gathered data and used electronic resources. I relied on the digital recordings of the interviews to provide accurate data.

In preparing the qualitative data for analysis, I transcribed the interviews verbatim. I captured the following information for each document: name of document, place of storage, type of data, date and time of collection, place of collection, and from whom collected (Bazeley, 2014). After transcribing the interviews, I employed member

checking and asked each interviewee to review the transcript while I prepared to analyze the data. As suggested by Creswell (2013), I initially read through the transcripts and made notes in the margins of any ideas or key concepts that occurred to me.

**Coding.** After creating a priori codes by using the theoretically-based subscales from the OSCS (Bolliger & Inan, 2012), the interaction types from Thompson (1967), and the quality of connections from Dutton and Heaphy (2016), I began the process of coding and categorizing the information in the transcripts. Applying Creswell's (2013) method of "lean coding," I began with a short list of five or six categories with codes and expanded the categories as I reviewed the data (see Appendix E for a list of codes). My initial list of categories included the four subscales of the OSCS (comfort, community, facilitation, and interaction and collaboration) which served as the foundation for my thematic analysis. I derived child codes for the interaction and collaboration category from Thompson's (1967) work regarding interdependence which described the intensity of interactions among people who work together (pooled, serial, and reciprocal) and from Dutton and Heaphy's (2016) work regarding quality of connections (low, medium, and high).

I attempted to assign codes based on the characteristics of the interaction and the types of emotions or the degree of vitality that group members perceived were elicited. Bolliger and Inan (2012) referenced Berge's (2002) definition of interaction which was a "two-way communication among two or more persons." I recognized Berge's definition and purport that an interaction may or may not result in a connection as defined by Dutton and Heaphy (2016). While a connection was not a requirement for an interaction; for the purposes of this study, an interaction was required to make a connection. I coded

interactions that elicited feelings of positive regard, mutuality, and vitality as “high-quality” connections; and I coded interactions that impeded growth, dampened creativity, suppressed feelings of safety, or that were perceived as life-depleting as “low-quality.” I coded interactions that were neutral or that had little influence on vitality as “medium-quality” connections. In the initial interviews, I found it challenging to elicit from students and alumni their specific feelings or emotions regarding their interactions with other students. Therefore, in the follow-up interviews, I asked them explicitly to share an interaction that they would have considered high-quality and one that they would have considered low-quality. I coded each based on the participant’s perceptions of high- and low-quality interactions with others as described by Dutton and Heaphy (2016). As I coded excerpts for the types of interactions and the quality of connections, I considered the complexity of the learning project or assignment and the description that the participant gave of the interaction with other group members and/or faculty while working on the assignment.

While I began the coding process using a priori codes, I remained open to additional codes that emerged from the data during the analytical process as suggested by Creswell (2013). I asked a colleague who was familiar with qualitative research and with online teaching to review my coding of five of the 14 participants’ transcripts including two faculty members, two students, and one alumna from the study. She suggested additional codes which are shown in italics in Appendix E. I initially focused my analysis on individual cases before looking for common themes across cases (Bazeley, 2014). As I continued to analyze the data, I looked for themes to emerge where several codes could be combined to form a common idea (Creswell, 2013). As themes and subthemes

emerged, I organized them within Dedoose as a “family,” some with children where appropriate.

While I used Dedoose as a research application for thematic coding and for organizing my codes, I reviewed and coded themes myself rather than using automatic coding or keyword searches within the software application. As I analyzed the data, I also recorded my thoughts and hunches in my reflexive journal (Rossman & Rallis, 2003) which added to the depth of my analytical thinking and helped me to avoid premature closure (Bazeley, 2014). After I had completed the coding within Dedoose, I exported to an Excel spreadsheet the excerpts that I had coded with each of the OSCS subscales (comfort, community, facilitation, and interaction and collaboration) and retention which I refer to as the five major themes. Each excerpt in the Excel spreadsheet included the excerpt range which I could use for easy reference back to the original transcripts if needed.

Using the filter option within Excel, I selected the excerpts coded with each of the five major codes and created a spreadsheet for each code. I then highlighted potential themes on each spreadsheet by changing the color of the font for the highlighted words within Excel. By reviewing each spreadsheet that contained excerpts for each of the five major codes, themes began to emerge that indicated which other codes had co-occurred with each of the five major codes. I then made handwritten notes of each theme and of each participant who had mentioned the theme in one of their excerpts. For example, my notes indicated that 13 of the 14 participants had indicated that responsiveness of faculty and students was a theme that had contributed positively to their perception of community. Through this analysis as I sought to answer the research questions for this

study, I learned which themes had influenced the students' perceptions of each of the five major codes and ultimately their perceptions of connectedness and their desire to persist within the program. Table 2 shows the data sources and types of data analyses I used to answer the research questions for this study.



## Research Questions, Sources, and Analyses

Table 2

### *Research Questions, Data Sources, and Data Analysis*

| Research Questions  | Data Sources                 | Data Analysis  |
|---|------------------------------|--|
| 1) To what extent do current students and did alumni feel connected in the Online MBA Program at William & Mary?  | OSCS (Bolliger & Inan, 2012) | Quantitative, descriptive analysis   |
| 2) What were the students' experiences of connectedness and the quality of those connections?   | 16-item Faculty Survey       | Quantitative, descriptive analysis   |
| a) What in the students' experiences of those learning activities were consequential to them that made them feel connected?   | Faculty interviews           | Qualitative analysis (informs document analysis and student interview questions) |
| b) How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?                                     | Course syllabi, assignments  | Document analysis  |
| c) How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program? | Student interviews           | Qualitative, case study, thematic analysis, a priori coding                      |

**Mixed methods.** The data from the OSCS not only guided the participant selection process but also informed the interview questions. I looked at any relationships between the OSCS subscales and the students' reasons for persisting or not persisting in a

course or the program. For example, did comfort or community positively or negatively influence retention? I paid particular attention to participants who had considered leaving the program but chose to persist. I wanted to know if students who decided to leave the program did so because of circumstances related to one or more of the four OSCS subscales or if they left for other reasons. By using the data from the OSCS, I could better guide the interview questions and gather richer qualitative data than would have been possible without it.

### **Ethical Considerations**

I obtained permission from the William & Mary Education Institutional Review Committee (EDIRC) to conduct the study. Participation in this study was completely voluntary, and any participant could have left the study at any time. During completion of the online survey, participants indicated their consent to participate in the study by clicking on the “Yes” button at the bottom of the first page of the survey. Participants who were selected and who agreed to participate in the qualitative portion of the study signed an informed consent prior to being interviewed which explained the details of the study, including the following: All data was kept secure and deidentified. The digital files from the recorded interviews were stored on a password-protected computer. In order to alleviate risks, no identifiable information (name, identification number, etc.) were used when describing the results. Although I knew the identities of the participants, I did not and will not divulge their identities or identifiable information. I have not associated participant names with any results of this study. I asked each participant to choose a pseudonym that I used in place of their name so that responses cannot be connected to their personal identities. All responses, writings, and other materials are kept confidential,

meaning no one will be made aware of participation. Any paper copies of related materials were locked in a secure place (only I had access to the key). Once transcribed and reviewed by the participant, paper copies were destroyed. All email correspondence was stored on a password-protected computer. I did not disclose names or other identifying information such as specific roles or exact length of service in any discussion or written documents about the research.

### **Assumptions, Delimitations, and Limitations**

As a social constructivist (Dewey, 1938; Palloff & Pratt, 2007; Piaget, 1969; Rovai, 2004; Vygotsky, 1978, 1986), I assume that knowledge is constructed through social interactions and that students play an active role in the learning process. In conducting this study, I also assumed that the participants provided honest responses to the online surveys and to interview questions.

This study was limited to the students who were in or who had been in a single program at a single university. Therefore, the findings are not generalizable to a larger population. While the OSCS is considered a reliable and valid instrument, I added to that instrument six items of my own that informed my selection of interview participants. I chose to interview Anita who had the lowest average student connectedness score from the OSCS as she represented an important group of students who were low in perceived student connectedness. By interviewing students who were extremely low in perceived connectedness, I sought to learn what might be helpful in increasing their level of student connectedness. Other delimitations included the incentives offered for participating in the study. The initial offer of a \$30 gift card may have incentivized survey respondents to

participate in the qualitative portion of the survey for the sole purpose of receiving the gift card rather than to offer substantive answers to the research questions.

Participants who were either strongly satisfied or strongly dissatisfied with the program may have been more likely to volunteer to participate. This limitation may have skewed the quantitative measurements. Additionally, since all students who have been in the program were invited to participate, there was variability in the number of courses that participants had completed at the time they participated in the study. Some may have only completed one course in the program while others may have already graduated. Time spent in the program may have influenced the development of connectedness. Those participants who had already graduated may have been less likely to remember specifics about the program than those who were still enrolled.

Additionally, the sample of respondents who were invited to participate in the qualitative portion of the study may not have been a representative sample of the population. Since at the time of the study, the OMBA Program had a 95% retention rate, it potentially had a small number of students who had considered leaving a course or the program. I included in my sample a higher percentage of those students who had considered leaving than what was representative of the program in order to gather the data necessary to answer research Question #2c.

### **Positionality**

As an employee of the William & Mary Raymond A. Mason School of Business and one who has worked with faculty to develop the courses, I possess knowledge of the program that others may not have. I also have experience as an online student as I have participated in a mostly OMBA program myself. Although my OMBA student

experience occurred a number of years ago using less sophisticated technology, I am quite comfortable with and am not easily intimidated by the hardware and software that are required to be successful in an online program today. More recently, I have taken online courses where I have collaborated with other students and been a member of an online community. As a social constructivist, I value the connections that I make with other students and with faculty. My comfort with and knowledge of technology may allow me to make those connections more easily than others who may not be as comfortable in an online environment nor as technologically savvy. I understood the importance of bracketing my opinions and attempted to suspend judgment on my expectations and perceptions of online learning. I listened carefully to the stories told by the participants and attempted to understand their views and apply their lens as I researched this topic.

## **Conclusion**

By employing a mixed methods approach rooted in social constructivism and considering adult learning theory, I generated and analyzed data for the purposes of better understanding online student connectedness, the types of interaction students have in completing coursework, and the quality of the connections made during those interactions in an OMBA program. Using quantitative descriptive analysis and qualitative thematic analysis, I sought to answer the research questions outlined above. While the results are not generalizable to a larger population, the findings are beneficial to the specific program and can potentially influence further research on the topic of online student connectedness. In the next section, I discuss the findings from the study.

## **Chapter Four: Findings**

This study focused on the extent to which students and alumni felt connected in the Online MBA (OMBA) Program at William & Mary. In addition to exploring the interactions and connections that students experienced in the program, the study considered the quality and potential influence that those interactions had on the students' feelings of connectedness and their intentions to persist in a course or the program. In this chapter, I present the findings from the study. First, I detail the survey results and the participant selection process. I then share brief profiles of each of the 14 participants whom I interviewed. Lastly, I detail how the data I collected helped to answer the main research questions in the study and conclude with a summary.

### **Survey Findings and Participant Selection**

I invited 422 previous and current OMBA students to participate in a Qualtrics survey which included the 25 questions from the Online Student Connectedness Survey (OSCS; Bolliger & Inan, 2012) and six additional questions as previously explained in Chapter 3. The results of the survey informed my participant selection process. I analyzed the descriptive statistics by importing all respondent data into SPSS. A total of 174 respondents completed the survey, a response rate of 41%. Of those who responded, 125 or 71% indicated a willingness to participate in a one-hour, one-on-one interview with the researcher. Figures 3 and 4 show the statistics for the average connectedness scores of the 174 respondents. I calculated the average connectedness score for each respondent in

Excel by averaging the responses of Questions 1-25 of the OSCS. Respondents rated each item using a 5-point Likert scale ranging from 1 to 5 (*strongly disagree* to *strongly agree*). The higher the score, the higher their perception of connectedness.

| Statistics     |         |        |
|----------------|---------|--------|
| Total          |         |        |
| N              | Valid   | 174    |
|                | Missing | 0      |
| Mean           |         | 4.0018 |
| Median         |         | 4.0800 |
| Mode           |         | 4.32   |
| Std. Deviation |         | .56671 |
| Variance       |         | .321   |
| Range          |         | 2.64   |
| Minimum        |         | 2.36   |
| Maximum        |         | 5.00   |

Figure 3. Average connectedness score statistics generated by SPSS

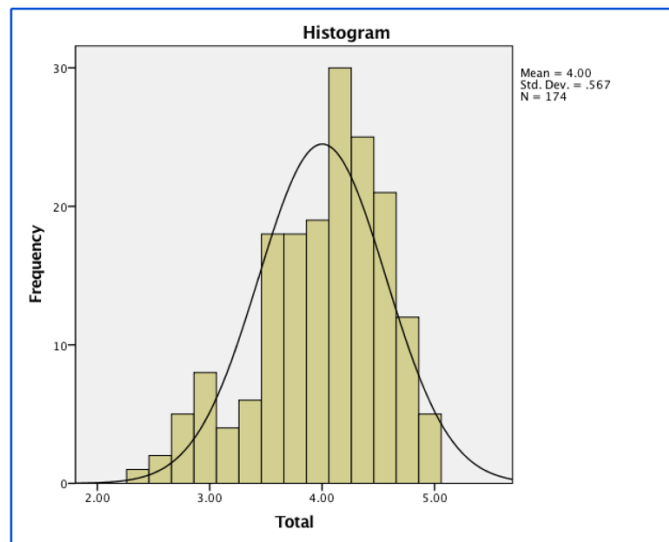


Figure 4. Average connectedness score histogram generated by SPSS

Following the selection guidelines as set forth in the method section in Chapter 3, the first priority for selection was to choose a representative group with average scores across the continuum of least-, moderately-, and most-connected. I also desired one or two participants who had either considered dropping a course or the program or who had

dropped the program. Only eight respondents indicated that they had considered leaving a course or the program about half the time or more; I selected two of those respondents. I did not choose respondents who had indicated that the reason they left the program was due to personal issues (such as illness) as I was interested in learning what aspects of the program may have contributed to their desire to leave.

I considered the range of average connectedness scores (2.36 to 5.00) from all 174 respondents and sought to select respondents who were willing to be interviewed and who had a range of average connectedness scores across the continuum of the least-, moderately-, and the most-connected scores as calculated in Table 3.

Table 3

*Average Online Connectedness Scores for Students in Thirds*

| <b>Least-connected</b> | <b>Moderately-connected</b> | <b>Most-connected</b> |
|------------------------|-----------------------------|-----------------------|
| >=2.36 and <=3.24      | >3.24 and <=4.12            | >4.12 and <=5.00      |

I first selected respondents with the least- and the most-connected average connectedness scores and then chose other respondents across the continuum who also met the requirements of having program satisfaction scores and importance of developing a professional network scores that were scattered across the respective continuums. The demographic data regarding the 10 respondents (students and alumni) whom I selected to interview are shown in Table 4. Their data from the OSCS are shown in Table 5. The ages of the students and alumni who participated in the interviews ranged from 31 to 50. The average age was 39.



Table 4

*Demographic Data for Students and Alumni Who Participated in Interviews*

| <b>Participant</b> | <b>Gender</b> | <b>Ethnicity</b>       | <b>Time in Program</b>          | <b>Proximity to Campus</b> |
|--------------------|---------------|------------------------|---------------------------------|----------------------------|
| Anita              | F             | Black/African American | < 1 year                        | Long distance              |
| B.J.               | M             | White                  | < 1 year                        | Long distance              |
| Bob                | M             | White                  | 1 year                          | Regional                   |
| Clint              | M             | Multi-race             | Graduated                       | Long distance              |
| Fred               | M             | White                  | Graduated after first interview | Regional                   |
| Hunter             | M             | White                  | Graduated after first interview | Regional                   |
| Jennifer           | F             | White                  | ~1 year                         | Regional                   |
| Jessica            | F             | White                  | Graduated                       | Regional                   |
| Justin             | M             | Hispanic               | < 1 year                        | Regional                   |
| Tony               | M             | White                  | ~ 1 year                        | Regional                   |

Table 5

*Data from OSCS for Students and Alumni Who Participated in Interviews*

| Participant | Satisfaction | Level of Considered of Leaving Course or Program | Importance of Professional Network | Average Comfort | Average Community | Average Facilitation | Average Interaction & Collaboration | Overall Average Connectedness Score |
|-------------|--------------|--|------------------------------------|-----------------|-------------------|----------------------|-------------------------------------|-------------------------------------|
| Anita       | 2.00         | 2.00   | 1.00                               | 3.50            | 1.00              | 2.83                 | 1.60                                | 2.36                                |
| B.J.        | 2.00         | 5.00   | 2.00                               | 2.88            | 2.17              | 3.33                 | 3.80                                | 3.00                                |
| Bob         | 4.00         | 2.00   | 3.00                               | 3.63            | 3.33              | 3.67                 | 3.40                                | 3.52                                |
| Clint       | 5.00         | 1.00   | 4.00                               | 4.88            | 5.00              | 5.00                 | 5.00                                | 4.96                                |
| Fred        | 5.00         | 1.00   | 4.00                               | 3.88            | 3.50              | 4.33                 | 3.40                                | 3.80                                |
| Hunter      | 1.00         | 1.00   | 4.00                               | 4.63            | 3.33              | 3.83                 | 4.60                                | 4.12                                |
| Jennifer    | 5.00         | 1.00   | 5.00                               | 4.13            | 4.17              | 4.17                 | 5.00                                | 4.32                                |
| Jessica     | 5.00         | 1.00   | 4.00                               | 5.00            | 4.83              | 5.00                 | 5.00                                | 4.96                                |
| Justin      | 3.00         | 1.00   | 4.00                               | 3.75            | 2.33              | 2.17                 | 2.00                                | 2.68                                |
| Tony        | 5.00         | 2.00   | 4.00                               | 3.63            | 3.67              | 4.00                 | 3.60                                | 3.72                                |

*Note.* All scores based on 5-point Likert Scale (1=*least*, 5=*most*); OSCS = Online Student Connectedness Survey

In addition to surveying students, I attempted to survey all faculty who had taught in the program, and I used those survey results to inform my faculty selection process. I considered the range of scores (3.40 to 5.00) from the overall student connectedness faculty survey. After dividing the range into three approximately equal parts (.53), I used the ranges shown in Table 6 for creating the least-, moderately-, and most-connected overall average connectedness scores for faculty:

Table 6

*Average Online Connectedness Scores for Faculty in Thirds*

| <b>Least-connected</b> | <b>Moderately-connected</b> | <b>Most-connected</b> |
|------------------------|-----------------------------|-----------------------|
| >3.40 and <=3.93       | >3.93 and <=4.47            | >4.47 and <=5.00      |

I interviewed four faculty members who represented two hard skill courses (such as *Accounting*, *Business Analytics*, or *Finance*) and two soft skill courses (such as *Leadership* or *Organizational Behavior*) and who also formed a sample across the continuum of perceived level of student connectedness within their courses based on their responses to the 5-point Likert scale survey as shown in Table 7.

Table 7

*Average Survey Scores for Faculty*

| <b>Professor</b> | <b>Average Comfort</b> | <b>Average Facilitation</b> | <b>Average Community</b> | <b>Average Interaction &amp; Collaboration</b> | <b>Importance of Connectedness in Their Course</b> | <b>Residency Attendance</b> | <b>Overall Average Connectedness Score</b> |
|------------------|------------------------|-----------------------------|--------------------------|--|--|-----------------------------|--|
| Wally            | 5.00                   | 3.75                        | 4.00                     | 3.67   | 3.00   | 5.00                        | 3.87                                       |
| Oscar            | 5.00                   | 5.00                        | 4.00                     | 4.67   | 3.00   | 1.00                        | 4.47                                       |
| Linda            | 5.00                   | 4.38                        | 4.00                     | 5.00   | 4.00   | 5.00                        | 4.53                                       |
| Robert           | 5.00                   | 4.88                        | 4.00                     | 4.67   | 5.00   | 4.00                        | 4.73                                       |

*Note.* All scores based on 5-point Likert Scale (1=*least*, 5=*most*)

The faculty members who participated in the interviews had taught or were teaching the following courses: *Business Analytics*, *Financial and Managerial Accounting*, *Leadership in the 21st Century*, and *Renaissance Manager*. I chose the faculty who taught *Business Analytics* and *Renaissance Manager* because they had the lowest and highest overall average connectedness scores respectively. I chose the faculty member who taught *Financial and Managerial Accounting* because he scored moderately-connected on the survey, and one-half of the students interviewed made very positive comments about his class. They mentioned that their groups were engaged, and Clint said it was one of the best classes he had ever had. Lastly, I chose to interview the faculty member who taught *Leadership in the 21st Century* as she had recently implemented new ways of connecting with students across all sections of the course.

### **Participant Profiles**

I interviewed 10 students in initial one-hour individual interviews and 20-minute individual follow-up interviews. Each student received an electronic copy of their transcripts and was asked to review them for accuracy. Anita, Jessica, and Hunter submitted clarifying comments for words that were inaudible. All other students who were interviewed stated that the transcripts appeared to be accurate. With the exception of a misspelled word noted by one faculty member and an incorrect name noted by another, the four faculty members who were interviewed responded that their transcripts appeared to be accurate. The interview protocol for the initial interviews for students and alumni is in Appendix C, and in Appendix D for faculty. The interview protocol for the follow-up interviews for students and alumni is in Appendix F. The interviews revealed the following information about the participants.

**Anita.** Anita was somewhat dissatisfied with the program and was least connected of all 174 students based on her average connectedness score. Therefore, she is not the typical OMBA student. However, she represents an important group of people who are low in student connectedness. She was one of a dozen students (almost 7% of those who responded to the survey) whose average connectedness score was less than three. It is likely that the students who did not respond to the survey would have had lower overall average connectedness scores if they had responded when compared to the 174 who did respond. Their lack of desire to complete the survey indicated that they may have felt less connected than those who responded. By including Anita in the interviews, I sought to learn what might be helpful in increasing the perceived level of connectedness for those students who scored low on the OSCS.

Anita described her interactions and connections with others in the program as minimal which had a negative connotation for her. She clarified that the negative connotation was a result of the few interactions that she had experienced and explained that the interactions themselves had not been negative. She was satisfied with her first course which offered more instruction relative to her other courses. It also provided the opportunity for more casual interaction with students. It was the only course of the four that Anita had taken that required group work. She found her group members to be very nice, good people; but it was difficult to work around everyone's schedule. Anita was most comfortable interacting with students in the first class where discussions were more casual and had less restrictive grading. She did not feel comfortable having a free-flowing discussion if it were graded. By her fourth course, she had lost track of most of the group members from her first course and had only been in class with one of them since. She felt

she had lost whatever bond that she had developed with them and said, “I feel like I’m still kind of a stranger online.”

Anita stated that every professor had been nice with trying to answer questions, but the professor in her second course gave detailed feedback and suggested that she look at the assignment from a different perspective and resubmit it. She found that helpful. She was also appreciative that the faculty overall had been very responsive with answering emails, and she was surprised when one professor responded to an email at midnight.

Two of the program administrators had visited Anita’s region and met with her and another student a few weeks before her initial interview. Anita described the meeting as a high-quality interaction and considered it her most positive and impactful interaction to date. Anita had questions about her next course and appreciated the opportunity to have a conversation with the program administrators. She was concerned about her upcoming quantitative course, but she said it turned out to be one of the best-facilitated courses that she had thus far.

**B.J.** B.J. was impressed with the organization of the program’s onboarding process for new students including the initial interview, welcome processes, and orientation. Despite a welcoming start, he withdrew from the program after three courses. B.J. was satisfied with the course content and felt the assignments were very clear. He described his interactions with others as satisfactory which had a positive connotation for him. His greatest challenge and most of his dissatisfaction in the program stemmed from difficulties in scheduling group work. While that dissatisfaction contributed greatly to his desire to leave the program, he stated that the primary reason he left was due to a change in personal circumstances and the need to spend more time with his family.

B.J. wanted to go to school and still be able to participate in his usual weekend activities here and there. He approached his assignments from a time management perspective. In almost all cases, B.J. found that scheduling group work did not go as he expected. Some group members desired a similar schedule as he. Others were often unresponsive until Saturday which resulted in the group having to spend all of Saturday night and most of Sunday pulling everybody's contributions together before the deadline. B.J. wanted a good grade and almost always found himself in the role of covering for people who did not do their part in a timely manner. He found that incredibly stressful.

Conversely, B.J.'s most effective group experience was in his first course. Even though most of the group members did not participate until the last minute, B.J. and another group member put together a "very cool" presentation. They had a really great idea that B.J. was very proud of. He described the experience as high-quality and stated, "Despite the fact that pretty much two of us did it, it was, it was a good feeling . . . when the professor really enjoyed it and thought it was a great idea."

Since leaving the program, B.J. had not interacted with any of his group members. He remained satisfied with his decision even though he said he was satisfied with the program, enjoyed the content, and really learned a lot. He had planned to return to the program but kept putting it off as he continued to focus on his family. While he liked William & Mary's program and its structure, the group work caused him a lot of stress. He has since applied to an evening face-to-face program at a nearby institution.

**Bob.** Bob was somewhat satisfied with the program, stating that he had learned a lot in some of the courses and not necessarily a lot in others. He felt he may have needed more background in some of the courses, or perhaps he should have been in a classroom



environment with a little more interaction where he could have asked questions. He really liked the way the program was structured and the flexibility of the mostly asynchronous format. Bob was uncomfortable reaching out to other students for help in understanding the material but found the tutor who was available in one of the quantitative courses to be extremely helpful. He appreciated the short 3- or 4-minute instructional videos in the courses as they aligned with his learning preference. Bob said one professor also shared stories about things that happened in his professional career which worked well for him. He thought it was a great way to learn.

Bob struggled a little in one of the quantitative courses with what he felt was incomplete instructions. He would have liked to have been able to ask questions about where certain formulas came from and in a handful of courses would have loved to have had another two hours of more in-depth video instruction. Sometimes when Bob was confused about a topic, he searched on YouTube for additional information. It would have been helpful for him if the professor had provided additional resources such as YouTube videos or supplemental readings that he knew were chosen by the professor and would have supported the material he was trying to learn.

**Clint.** Clint was extremely satisfied with the program, had one of the highest average connectedness scores, and had graduated from the program a year prior. His satisfaction stemmed from what he considered high-quality connections with colleagues who had the same or shared similar experiences within the industry which he worked. He described the connections he had made with students and faculty in the program as complementary.

Clint stated that he was offered opportunities to interact with course participants all the time and often had group work. At first, he did not like group work. Clint preferred to do the work alone because he was confident his work would be right. When he began working with his group, however, he discovered that he had some shortcomings; and by leveraging their strengths, the group made the project better. Clint connected with five group members in the first course of the program. They were still in touch, extremely connected, and always communicating a year after graduation. His group members motivated one another, coached one another, and cheered one another on through difficult times. Clint had contemplated leaving the program once because of his overwhelming work schedule. He decided to stay because of the encouragement of his group members.

While Clint felt that online and brick-and-mortar courses were both good and both had their positive attributes, he felt that online courses were superior. In the brick-and-mortar courses, he would take notes quickly but sometimes had trouble interpreting his handwriting. One positive that he took away from the online experience was that he was able to go back to the recordings and play them over and over again which helped in his note-taking. Clint emailed one of his professors about a year after he had completed his course and told the professor that his class was one of the best classes that he had ever taken. The professor replied, “What a pleasant surprise.” The two had different viewpoints, and Clint appreciated the professor pushing back on him. They developed a relationship which caused Clint to reconnect a year later.

**Fred.** Fred had just recently graduated from the program and was extremely satisfied with his experience. He described it as an “awesome opportunity” and the structure of the program as “revolutionary” regarding how it tried to mimic the “brick

house” in the online world. When asked what contributed most to the feeling of the brick-and-mortar experience, Fred replied that it was “how they structured the content.” He recalled that Professor Walley had walked the campus and recorded videos at the sunken garden and in the Wren Building. Fred felt a connection to the university through those recordings. When he attended the residency weekend and saw those locations physically for the first time, he was familiar with them even though he lived outside the area. He felt the feedback that professors provided was “top-notch,” which also contributed to the brick-and-mortar feeling. Developing a professional network was very important to Fred who felt that the residency was one of the best things that William & Mary had established. It offered students the opportunity to connect with one another, with faculty, and with the Executive Partners (2019; see “Definition of Terms” for further explanation).

Fred appreciated the structure of the courses and thought each class ramped up nicely and provided not only video instruction but also links to examples. He felt the various instructional formats reached the different learning styles of students. He described himself as a visual learner who was kind of slow to pick things up in some respects, and he thought the modules really helped in that regard. The student bios helped him to connect with other students when he needed to refresh his memory on their careers and on what they were doing.

Fred recalled only one group interaction where he was disappointed when another group member was not pulling their weight. Overall, he said he had great group experiences. The types of interactions that Fred had with other students depended on the level of communication and time needed for communication that was required to

complete a group project. Often, group members were in different time zones; but they were flexible and, for the most part, eager to get the job done.

Fred's greatest challenge in the program was time management to ensure that he did his job well and to also ensure he was meeting his family's needs and the demands of his coursework. He never or almost never thought of leaving a course or the program. He knew that life threw you challenges, and he was of the mindset that once he started, he was not going to stop. Two years seemed like a long time, but, for him, it went by extremely fast.

**Hunter.** Hunter graduated after his initial interview and before his follow-up. He chose the word "interdependence" to describe his interactions with others which had a positive connotation for him. He felt that the students and professors all learned from one another. He thought the access to and interaction with the section leader in *Leadership* and in *Organizational Behavior* was engaging and made things run smoothly. He also recalled an instructor who had weekly conference calls where students could talk with him about the course.

Hunter felt that group projects promoted the most interaction, and he had multiple group assignments. His group members would often interact synchronously online which allowed them to really work with each other, talk things through, and share multiple perspectives. That was a very important part for Hunter and was why he felt the interactions between group members were so strong. He described his most effective group experience as a project where his group chose to work on something related to one student's wicked problem (see "Definition of Terms" for further explanation). His group worked through it thoroughly which was motivating and enriching for Hunter. Other

group members were also excited and very engaged. Hunter felt he was getting a lot out of not only what he was showing others but what they were giving him in feedback. Hunter attributed the level of engagement to the group's choice of the problem and the buy-in of more than one person in the group. He said the group had so many perspectives and so much thought.

Hunter appreciated the different perspectives because he had worked for the same company for a long time and had no intention of leaving. A professional network was very important to him. He knew there was not as much face-to-face interaction in the online program as he would have liked; therefore, he tried to get involved when he could. He had been to campus several times for special events. In his follow-up interview, Hunter said he still interacted with his group members, though less frequently than when he was interviewed seven weeks earlier. He said his group had been keeping up somewhat, but most of the interactions were on LinkedIn, a social network platform for connecting with other professionals.

**Jennifer.** Interaction and collaboration varied among Jennifer's classes. Some courses had groups; others did not. Some encouraged discussion boards. She had a "super-connected" group of "go-getters" in her first class who connected several times each week through Skype, text, and phone calls. Her group in her class that followed had weekly conferences. Though not quite as connected as the first, she felt it was definitely connected. The interactions in her classes varied based on the requirements of the class and the group members. However, Jennifer felt that group work had really improved connectedness.

Jennifer recalled her most effective group experience as one where her group was connected. She said they met and talked all the time, and she believed that really helped her to grow and become more comfortable with everything. Jennifer described her interactions with others as “self-realization” which had a positive connotation for her. She attributed her growth to the support that she received from other students and their different backgrounds. Over time, she learned that she could have a very different point of view but one that was still very valid. She described the effective part of her group experience as “inclusive.”

Jennifer thought the learning management system really helped form the connections that she had been able to keep throughout all of her classes. She said that as difficult as it was to coordinate schedules, she had actually liked her classes where she had group work more than the ones that did not. Toward the end of the semester, another student messaged her and said, “You know, I really enjoy your posts every week. . . . I just wanted to say that I always look forward to them, and I'm glad to be in classes with you.” Jennifer invited that person to join her group.

Jennifer reiterated that as much as people hated group work, she thought that collaboration really helped, not just with making connections with others, but also with connecting to the material better. She thought that being able to talk through the material with someone else really helped her to understand it more. She was able to work through problems with her group in her *Accounting* class and understood it better than the *Business Analytics* class where she was on her own. She said she had the videos and the book, but “not being able to really talk through issues with somebody kind of made it more difficult.”

**Jessica.** Jessica had graduated prior to her initial interview and was extremely satisfied with the OMBA Program. Her average connectedness score tied her for the second highest place among the 174 survey respondents. Only one respondent (who did not wish to be interviewed) had surpassed her.

Jessica appreciated the introductory videos that students created in every class. She thought they were “really cool.” On the very first day, they shared their background, where they were from, what they were looking to get out of the course, and how they wanted to communicate. Almost everybody shared their phone number. She said she would then add those people to her phone book, and they would end up texting each other, thus building her professional network and fostering community.

Jessica said she learned from everybody in the class, students and faculty alike. She indicated there was a lot of group work in the program, and she learned from other people and their experiences in their jobs. Jessica lived in the region and sometimes met with other students on campus to catch up and study together in the library.

Having previously not seen herself in a leadership role, she was surprised in the first class when she became the leader in the group. Her group project scored one of the highest in the class, and her groupmates gave her 100% for her contribution. When Jessica met her professor at the residency (see “Definition of Terms” for further explanation), he reminded her of how impressed her groupmates were of her as a leader. Prior to that exchange, she had not really thought about her leadership skills. She said, “I learned a lot about myself in the process that I didn’t know that I had that in me.”

Jessica described her feelings regarding her interactions and connections with other students and faculty in the program as “positive.” She said group work fostered

communication, and her group used a lot of interactive online tools to brainstorm virtually, but not necessarily at the same time. They could also have synchronous meetings. The “great students” and “great teachers” helped to create an “outstanding experience” for her. She had a lot of peers whom she reached out to and who reached out to her. She also received a lot of support from the professors and the students in the program. She enjoyed her academic experience, always loved school, and never considered dropping a course or leaving the program.

**Justin.** Justin had taken two classes at the time of his initial interview. He was neither satisfied nor dissatisfied with the program. Overall, he described his interactions with others in the program as “infrequent” which had a negative connotation for him. Unfortunately, in the first course, Justin’s group experienced very poor group dynamics after submitting their mid-term peer evaluations which adversely affected the group’s connectedness. Poor group dynamics also contributed to Justin’s desire to drop his third course. Early in that course, he found himself in a mostly non-responsive group where only two of the five group members were working on the group project. Because of that, he dropped the course but remained in the program.

In his second class, Justin said he was “so taken aback” when his instructor recommended that he not use exclamation points in his discussion posts. Justin had included an exclamation point in a well-intentioned greeting to show excitement to a fellow student when Justin had just learned that he and the student worked for the same company. Justin did not indicate why the instructor felt the exclamation point was inappropriate or if he was aware of the reason; but as a result, Justin said he would “never try to open up again in our discussion posts.” He stated, “I mean, that basically just killed



any desire I had to be, you know, more open or friendly in the discussion posts. . . . I wasn't motivated to try and learn anything about anyone after that.”

**Tony.** Tony described his interactions with others in the program as “outstanding” and was extremely satisfied. Tony’s most effective group experience happened in his first class. His professor was engaging and explained where they should be at any given time. Tony believed it worked well because the students held each other accountable. Tony wanted to do his best because he wanted his group to do its best. He was not aware of a time when a group member did not step up and do what they were asked. He also could not give a good example of poor group performance. Tony said his group in his second class became a support network for him “as if we were bonded together.” He stated the ability to get together in groups had been fantastic. All of his groups had been very engaged, and everybody was very quick to help somebody else out.

Tony had been concerned with what the interaction would be in the class with the teacher and the other students. One professor allowed students to communicate with him through WhatsApp text messaging. Tony said he had a question, and the professor responded within minutes through WhatsApp. Tony admitted that the courses lacked real-time interaction, but he appreciated the ability to replay video lectures which he found especially important for computation issues. In the online space, he was able to focus on new material or on material that he struggled with.

**Professor Linda.** Professor Linda was intentional in designing group assignments for her course. She wanted to engage her students with the course and with one another in the initial group project. She designed another assignment in which students gave each other feedback on a project, and she did that for two reasons. First, she wanted the

students to be aware of each other's projects. They had put a lot of work into them, and she wanted them to relate their work to others'. Secondly, she felt they would benefit from giving and receiving feedback which would also improve the quality of the projects by the time they submitted them to her for grading.

Professor Linda's group assignments required varying levels of collaboration, but none were designed so that students could divide the work and complete them individually. The discussion board required both discussion and debate. She chose complex ideas that gave students something substantial to discuss. She felt they really enjoyed the back and forth of the debate, and she thought students learned a lot from sharing different perspectives.

Professor Linda felt she got to know her students somewhat by watching their introductory videos or statements and by reading their discussion board conversations. Students reached out directly to her through email which she checked daily when her class was ongoing. She said her students loved the synchronous case studies, and she felt those did quite a lot to foster community. In the case discussions, students shared their experiences in dealing with particular concepts which benefited them educationally.

Students often chose an alumni project for their last project in her class and planned some sort of alumni activity, gathering, or trip. She was not surprised by that as she felt students had definitely formed a community and become attached to each other. The residencies did a wonderful job to help with that. They were always well-attended, and students sometimes attended more than the required one. Professor Linda said they enjoyed their time and found it useful, not only pedagogically but also in terms of meeting people and the professors. Professor Linda tried to attend the residencies to give

students the opportunity to meet her. In addition to coming to campus for residency, she knew of two students who traveled from other countries and brought their parents to graduation. Students came from all over to physically be on campus and make that connection. Professor Linda had taught at the university for over a decade and had taught online for two years. She thought the students really felt like they were alumni of the program.

**Professor Oscar.** Professor Oscar taught a hard skills course and encouraged group work because he felt it helped students become more attuned with the collaborative world in which they would function. While he required group work during the first week, students had the option each remaining week to either work individually or with one or more of their group members. Professor Oscar thought group work was essential to achieving the program's objective, but he also believed it contributed positively to learning. He felt sure that group work had improved the grades of some students because they had interacted with others who may have had a little more experience and helped them to polish their responses. Group work also helped students find more resources in their peers, making the work more enjoyable for those who either enjoyed the interaction or for those who liked to teach.

Professor Oscar tried to make it clear to his students what they could gain by teaching others. He felt that for those who provided insight, it clarified their understanding and made them better collaborators. The other students also benefited from the experience. They may have saved hours of time. The professor could have expressed an idea, but another student may have explained it in a way that was easier for the student to understand.

Professor Oscar said that while the individual pacing exams were focused on literacy and minimum learning objectives, the group module submissions were ambiguous or complex enough that they required analysis, judgment, and higher-level thinking skills. He felt that students who chose to do a lot of group work and collaboration found the course experience to be more positive. He felt the students benefited from the collegiality, and he knew they benefited from the exchange of ideas. Professor Oscar thought that community was very highly prized. In his course, he tried very hard to meet the needs of the students who felt that way.

Professor Oscar stated that he got to know his online students better than his face-to-face students because of how he designed the assignments. Within the course, he asked students four times to share how ideas were relevant to their professional life or to the professional life they aspired to have. He learned about the industries in which the students worked and the projects that they were working on. He personalized their education to help students see its relevance and to motivate them.

**Professor Robert.** Professor Robert taught a soft skills course which was the first course that students took in the program and one where they often made connections with others that lasted throughout the program. Professor Robert encouraged his students to work together as design thinking, a central part of the course, was best learned by doing. He surveyed his students prior to placing them in groups, taking into consideration their schedules and their work preferences. He showed them collaboration tools that they could use but allowed the groups to decide for themselves what worked best for them. Professor Robert then assigned the groups a challenge, and they quickly realized they could not do it individually. Much of the work in the course was ambiguous and highly collaborative.

The groups completed a workbook assignment each week and received feedback from the instructor that they then incorporated into the next week's assignment. The workbook culminated in a recorded presentation that was shared with the entire class. All groups were able to see the progress that other groups had made and what they had learned. The group work constituted about 50% of the grade, and Professor Robert adjusted grades when there was consistent feedback from the whole group based on contribution levels of individual students. If one student was singled out by the whole group as going above, then they may have scored higher than everyone else in the group, but it was zero-sum. Conversely, students may have scored lower if the entire group indicated that they were dragging their feet.

In addition to the student reflections, Professor Robert believed he got to know his students through the "introduce yourself" discussion board posts and the feedback he gave on their assignments. Professor Robert and the instructors he supervised responded to each student's introduction on the discussion board in their respective courses. Additionally, the assignment feedback often became a dialogue between the student and the instructor as the instructor asked questions rather than simply trying to make a point. Professor Robert believed that his students felt that they got to know him better than he got to know them because when at the residency, they approached him as if they were friends. Often, Professor Robert did not recognize them. He thought the students felt like they knew him because they watched his weekly videos which were a stark contrast to the tiny images of the students that Professor Robert saw each week.

**Professor Wally.** Professor Wally taught a hard skills course and frequently attended residency weekends to meet students. He did not require his students to work

together because he knew that working professionals often had busy schedules and found it difficult to coordinate synchronous meetings and group work. He stated that if his students wanted to work together that it was their responsibility to determine what worked for them as a team. While he was fine with students talking with and helping each other, he made it clear that he expected students to complete their own individual assignments.

In addition to email, one of the ways that students communicated with Professor Wally was via phone as he published his number. Other communications transpired through assignment feedback, comments within the assignment rubric, and discussion board feedback where he asked students to think about a problem in a certain way. While Professor Wally conversed, though not deeply, with his students sometimes on discussion boards and via email, he did not feel that he was able to get to know anyone until he had seen them in person and had an idea of what they were like. He perceived that he was one or two steps removed in the online environment when students were in different cities and living very different lives.

Professor Wally promoted interaction among his students as he felt it was good for them to build up a set of contacts, and it was also helpful to converse about course materials that may need clarification. Students may have been better able to communicate a concept to another student or in a different way than the instructor. While he did not want students to work together and submit the same assignment, he did not actively discourage working together. In fact, he often encouraged students to work together and talk about the problems and concepts within the course as long as they submitted their own work. Professor Wally encouraged his students to relate their work to others' in the

course and did this through discussion boards. He felt this was one way that the students could get to know one another and help to establish contacts. He felt it was important for the program for students to build community, but he did not feel that building community was necessary for students to develop baseline quantitative skills in his class.

In this section, I have discussed the profiles and experiences of the four faculty members and 10 current or previous students who participated in the interviews. The program offered many opportunities for students to connect with one another, particularly through assignments that required group work or interaction with others. While group work contributed positively to some students' perceptions of connectedness and was the main reason that they chose to persist in the program, other students dropped either a course or the program because of the challenges of group work. In the next section, I discuss how the quantitative data from the OSCS and the qualitative data from the individual interviews helped me to answer my research questions.

### **RQ1: To What Extent Do Current Students and Did Alumni Feel Connected in Their Online MBA Program at William & Mary?**

The average connectedness score for the 174 student respondents as measured by the 5-point Likert scale OSCS (Bolliger & Inan, 2012) was *moderately high* at 4.00 which indicated that on average, most respondents felt that they “somewhat agreed” with statements related to a perception of online student connectedness. Most felt more connected than not. In order to better understand what contributed to the *moderately high* level of connectedness among the current students and previous students in the program, this study further explored the perceptions of students and faculty with regard to connectedness, collaborative work and learning activities, and retention in the program.

## **RQ2: What Were the Students' Experiences of Connectedness and the Quality of Those Connections?**

**Connectedness - RQ2a: What in the students' experience of those learning activities were consequential to them that made them feel connected?** Key factors in contributing to the perception of connectedness were (a) the comfort that students felt in the program and (b) the sense of community that subsequently developed.

*Comfort.* As one of the subscales for the OSCS, comfort refers not only to a feeling of comfort with navigating the online learning environment but also a feeling of freedom to express oneself in the safety of that environment. The average comfort subscale score on the OSCS was the highest among the four subscales at 4.34 for the 174 who responded to the survey and at 3.99 for the 10 current or previous students who were interviewed. More than half the respondents who were interviewed shared positive comments about Canvas, the learning management system, without being questioned specifically about it. Comments ranged from it's "really effective" and I "really like" it to three respondents who said, "I love Canvas." Jessica stated, "It's amazing. It made it so easy to just send the professors a message."

The online environment within Canvas made it easy for students to connect and interact with one another, and Professor Robert had heard that some groups that were formed in his first class ended up staying connected after they were no longer in a group together. While comfort with the environment was an important factor in online connectedness, Professor Robert suggested that he thought it had less to do with the tools used by the groups and more to do with the complexity of the challenge that he gave them and the collaborative nature of solving that challenge in his class.



Clint attributed his level of comfort in the program to the maturity level of his colleagues and stated that he could have disagreements with other colleagues, but they were all professionals. Even though they disagreed, they could meet up somewhere and still go have an adult beverage and talk about other things that didn't keep them apart. They could set their differences to the side and still move forward as friends and colleagues.

Jennifer thought her level of comfort came from all of the support she received. She had great student advisors, and the teachers had always been very responsive to questions. In the early classes where she had more group work, Jennifer felt that her group members could really lean on each other. She bonded with some other students in the program who had similar academic backgrounds. They were able to lean on each other which made it easier for her to get through the program.

Conversely, Jennifer stated she always got a little uncomfortable with being on video. She said the program was "really big" on making videos during the first week to introduce herself, and those were always nerve-racking for her. At the time of her interview, she had just finished her sixth course and stated it was not as nerve-racking as before. However, it was definitely something that was a little uncomfortable for her.

Fred and Justin were both comfortable with the flexibility of the program. In addition to the flexibility, Justin stated he was most satisfied with the level of demand in the program and the encouragement of independent thought. He expressed a high level of comfort in the program, particularly with the technology platforms offered and his ability to effectively manage his time.

Hunter was comfortable with the academic experience in general. He felt that the kick off to each course was very well-done in requiring the students to create bios as the online course began. He felt comfortable getting through the program and navigating the online environment.

*Faculty responses.* Professor Robert and the three other faculty members I interviewed all said they strove to create a safe online environment where students were free to express themselves, and they did so in a number of ways. He typically responded to his students' questions within a day. In the discussion boards, Professor Robert encouraged discourse through agreement or disagreement. He showed students that they could have a contrary thought and support it with a resource to attempt to move the conversation forward. Second, in some of the individual assignments that were seen only by the instructor, he asked students to explore topics related to their own jobs. Professor Robert was amazed at the transparency and openness in the student reflections.

Additionally, Professor Linda encouraged free expression by posting videos of herself where she tried to express some level of vulnerability. She exposed either a weakness of hers or an area that she wanted to develop. She and other instructors tried to word their feedback so that it was somewhat personal such as, "Thank you for that kind of insight." She also may have made a point of talking about how much she wanted to learn from her students' diverse perspectives. She tried to be welcoming and inclusive in her tone. Though rare, she had given feedback to students in a discussion board when they seemed to be coming on too strong in their responses or in the way that they phrased their feedback. She tried very hard to respond to her students within 24 hours.

Lastly, Professor Linda made sure during synchronous online case discussions that there was never a strongly wrong answer to the case. She managed the discussion by never saying “that’s wrong” or “does someone know the right answer?” Rather, she used active listening and reflected back to the student what was said. She invited commentary such as “What do others think? Do you agree or disagree?” Her skill in leading the case discussion lay in asking the correct questions for students to consider the relevant topics. By creating a safe environment and asking the right questions, Professor Linda said she was generally able to guide the discussion in the desired direction.

Professor Wally offered a safe online environment by providing a discussion board for the students to introduce themselves and also a Q&A discussion board for all assignments. He set expectations up front regarding improper behavior. He explained what it was and that it was not acceptable. He moderated the comments in the discussion boards; and at the time of his interview, he had experienced no problems. He reviewed email at least twice daily, usually more often, and responded to students within 12 hours.

Professor Oscar said it was important to create a course that reflected a positive supportive environment. He did that through the communication that was embedded in the course design, the content of the pages, the first module with the welcome, the syllabus, his comments and responses to the students in their discussion posts, and his expectations for integrity. He felt that if a professor could give an immediate reply to a student that the professor scored positive points, and indeed, he did. In fact, Tony shared that he had an email exchange with Professor Oscar on a Sunday when he looked up the answer to Tony’s question and responded to him within 11 minutes. Tony said he was

amazed at how quickly the professors responded and stated, “It’s nice because it makes you feel like you’re not on an island. . . . My wife doesn’t respond to me that quick.”

If students had problems, they knew that they could express them without retribution. Professor Oscar shared that if a student seemed hesitant to express an opinion by opening with, “I hope I’m not being offensive,” then he would respond, “By all means, the goal is to express your view.” In doing so, he created a safe online environment that helped foster a sense of community.

**Community.** Despite being lower than the other three subscale averages from the OSCS, the average community subscale score reflected a *moderate* level of community. For the 174 students who responded to the survey, the average community subscale score was 3.26; and for the 10 who participated in the one-on-one interviews, it was 3.33. In addition to feeling free to express oneself online, the sense of community that students developed also influenced their perception of connectedness in the program. The interaction and collaboration among students and the connections they made with each other outside of the coursework influenced their perception of community.

*Interaction and collaboration within the coursework.* Anita perceived a low level of community in the program and felt siloed even though she said she had the opportunity to communicate and interact with course participants every week in the required discussion fora. She stated that in her first course, “We were freer to bring in personal and professional experiences that led to interesting discussion and better opportunity to bond with other students. This was lost in the following courses.” She was not comfortable when asked to disagree with another student in a discussion forum. She felt it introduced a negative point of view which in her mind did not foster bonding and

community. The graded discussion board assignments that had a word limit of 200 words about a particular topic did not help build relationships for Anita. For those, she was just trying to get through the assignment and get a grade.

B.J. attributed his perceived lack of community in the program to the unresponsiveness and lack of engagement of others in the course. While the discussion boards would often go really well, the group work situation was plagued with others' excuses such as "I haven't checked my email since Saturday," or "I'm not familiar with doing that." There were times, however, that B.J. felt community existed in the *Accounting* course which seemed to have more structure. He stated that there was a lot more involvement from people in the projects and in the discussion board assignments in that class. Students asked for help in the discussion boards and shared their experiences, which B.J. found beneficial.

While Fred thought that the online format presented a challenge for establishing community, there were times in the program when he absolutely felt that he was beginning to develop community with other students. In his final course, he felt that he was catching up with people; and throughout other courses, he connected with students whom he had interacted with in previous courses. He stated they would start right off with "Hey, I remember you from so and so class" and just continued where they had left off before. He said the storming, forming, and norming for the groups became easier as the program progressed.

Clint felt that community existed in his group when they worked on projects and leveraged their individual strengths. His most effective group experience involved group members who were scattered all over the country and one who was overseas. They

complemented one another and were able to come together as a community to get the job done.

In addition to the diversity of the students, Fred attributed the effectiveness of his group experiences to the caliber of students and the selection criteria for admitting students into the program. He said they knew it was going to be a challenging program but were willing to put forth the effort. Fred tried to do his best, not wanting to ever let his group members down. He said they wanted to engage; they wanted to work, and they wanted to produce a quality product. It was a “great opportunity to have.” Like Fred, Hunter also felt that the students throughout the program were of very high caliber. The interactions that he had with other students contributed most to his satisfaction. Hunter felt community existed when he met and got to know classmates through group work where he developed relationships, talked about business and how it related not just to the course content but to their jobs.

Jessica shared that she had a desire to connect with other people, and she and her group members showed a lot of school spirit. The advanced technology platforms made it easy to foster those connections. As they were Skyping, Jessica’s group members wore their William & Mary shirts, something that began organically and continued each week. Doing so was an outward display of a sense of community and their pride in the institution. She stated:

Everybody that I knew in the class, we were wearing William & Mary shirts when we were Skyping. It was just everybody was proud of going to William & Mary. . . . It just happened. Like we didn't talk about it. We would just be Skyping and then, "Hey, I like your, I like your shirt," and we're all just kind of wearing it. It

was just funny. I think we were all just that proud that we literally wore them like every week probably. I know that I did.

Bob and Fred each appreciated physical interaction when building community. Bob was looking forward to coming to campus for residency weekend in a few months after his interview. He thought that if he had participated in residency weekend earlier in the program, he may have developed a stronger sense of community. Bob felt that it was easier for him to reach out to someone and ask a question if he had met them first in person. While he had received regular emails from the university about various events, his work and family obligations prevented him from connecting with students outside of the online course experience. Similarly, Fred stated his ability to connect with others involved physical interaction as much as possible. He felt that a lot of the group interactions in his courses were more about “let’s get the assignment done” which was why he responded with a moderate level of community.

Fred received very prompt responses from and had good interactions with faculty. He shared an instance when he sent an email to his professor at 11:00 pm and received a reply within five minutes. He felt the faculty were very eager to teach the online students, just as they would in a typical classroom. When he needed clarification, the professors always responded back pretty quickly. They were very professional and tried to make sure he had the information he needed to be successful in his assignments.

*Connecting outside of coursework.* Justin believed the courses were well-designed to foster engagement, promote collaboration, and build community. He suggested, however, that it fell on the students to take action and further develop the feeling of community. In addition to opportunities to connect within the program, students found

ways to connect with others outside of their coursework. Fred made a unique connection with two senior program leaders after suffering an unfortunate and tragic loss while in the program. They traveled to meet him at a related event and offered their support to him and others who were impacted by very unfortunate and unexpected circumstances.

Hunter came to campus early in the program and participated in some special events at the beginning of the semester. He wanted not only to be part of the online learning community but also a part of William & Mary. He believed it would be helpful if online students were more aware of the on-campus events. Hunter discovered some of the events through the OMBA Program's online app. However, when he called to campus to inquire and get more details, he had to talk with multiple people to figure out how to participate. He felt that as an online student, he had to take extra steps to learn about and participate in the on-campus activities.

Clint traveled to another city to visit one of his colleagues, and the two of them went to a sports event together. Clint was not familiar with where his colleague lived, but he spent the day with his friend and toured the city. Clint stated, "That's the kind of bond that I got through this MBA online that I thought I would never get. . . . It's pretty tough to break. It's like two carbons having a cohesive bond together, right?" When asked how he developed that bond, Clint attributed it to shared interests and experiences among his group members. He said he shared a common path with some who had similar upbringings. He stated "We stay in touch. . . . because I guess we shared so much pain and suffering through the MBA program for the two years and it was just fast-paced and we just, we motivate each other."



Hunter and Tony were two of four participants who mentioned that they connected with others outside of the program through LinkedIn. Hunter was connected with about 60 students on LinkedIn, and his class group had a LinkedIn group page. In his follow-up interview, he said he still interacted with his group members, though less frequently than when I had interviewed him seven weeks earlier just prior to his graduation. He said he had probably not interacted with his group in the last month. They had been keeping up somewhat, but most of the interaction was on LinkedIn.

Additionally, Tony shared that approximately 50% of his group members had reached out to him outside of class and asked if they could connect on LinkedIn because they might have a business interest. He stated that perhaps 20% of those had reached out for information about a reference, career, or meeting up in the area. Tony said, "I don't think that camaraderie would have happened outside the class if you didn't foster one internally."

In summary, a feeling of comfort in the program and a sense of community were most consequential to the students' experiences that made them feel connected. Faculty who developed the courses were very intentional in creating a learning environment and learning activities where students would interact and feel free to express themselves. In addition to the maturity level of their fellow students, the support that students received from group members, faculty members, and student advisors contributed to their comfort level. The learning management system, Canvas, made it easy for students to connect and interact with each other which positively contributed to their comfort level within the program and to fostering community. Responsiveness of students and faculty also played a key role in students' perceptions of community. Lastly, the display of school spirit by

wearing university apparel while Skyping with their group members and connecting with other students through LinkedIn reinforced the sense of community that emerged as students worked together and collaborated with one another.

**Collaborative work and learning activities - RQ2b: How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?** Collaborative work and learning activities influenced the development of connectedness and ultimately a sense of community in both positive and negative ways. More students expressed positive comments about group work than negative; but for some, their group experiences were so negative that they influenced their decision to leave a course or the program. In addition to the interactions among the group members, course design and facilitation also played a significant role in the success or frustration of collaborative group work.

*Facilitation of learning.* Two of the four faculty members whom I interviewed had a significant amount of group interactions embedded in their courses while one had only one week of mandatory group work followed by six weeks of optional group work. The fourth faculty member required no group work in his course but allowed students to talk about concepts though not share work on graded assignments. Both the structure of the group work and the perception of instructor presence influenced the development or lack of development of community.

*Structure of collaborative work.* As Professor Robert stated, he felt that the collaborative nature required to solve the complex challenge that he gave his students in the first class contributed most to the connectedness of the group members which often continued throughout the remainder of the program. The challenge required highly-

collaborative, ambiguous group work throughout the course. The team synthesis in the first week and the design thinking project assignments each subsequent week required reciprocal interactions among group members which were the types of assignments that Professor Robert thought likely influenced student connectedness.

Professor Linda hosted synchronous online case study discussions. She knew that the students loved them because they had told her. She attributed that to the fact that it was one of the few opportunities they had in the program to see each other and to have what to them felt like a real business school experience. If they were unable to participate, she offered them an alternative assignment. However, she estimated that three-fourths of her students participated in one of the two case study discussions. She felt that being able to see how everyone looked and to listen to comments that were a little less polished than the discussion board were more revealing of people's personalities. Being able to see what the professor was like in real life and how they interacted with other people helped to humanize the program and the students to one another.

Professor Oscar structured his class such that he required group work in the first week, but in the remaining weeks of the course, students had the option to work individually or collaborate with their group members. He formed the groups so that any prior subject matter experience that the students had was spread across all teams. Group work was not essential to the learning process in his course, but Professor Oscar emphasized the benefits of what was gained when a student taught others. He estimated that 75% of his students chose to work with one or more members of their group. He had paid a lot of attention to the group choices that his students made. He said they could

have worked with their whole group, a subset of their group, or individually. A key finding of this study was that Professor Oscar recognized he had plenty of evidence that in many cases, the groups had bonded and had established a good rapport with their group members. Based on the discussion board posts, it was clear to him that the students knew each other. They knew their backgrounds and expressed interest in each other as individuals.

*Instructor presence and responsiveness.* Equally important to the design of the course was the way the course was facilitated, including the perception of instructor presence and responsiveness to student inquiry. While 80% of the students interviewed made very positive comments about the instructors being very responsive, Hunter felt that online instructor presence varied from course to course. One thing that worked well for him was when instructors were involved and communicating, not just through emails about what to expect during the week, but also giving specific and timely feedback from the previous week's assignment so he could apply it in the next week's set of learning objectives. He approximated that he received that type of quality feedback about 40% of the time. At other times, feedback was incredibly delayed for him, sometimes three to four weeks after the week of coursework; and there was not a lot of interaction from those instructors. Hunter felt that timely feedback was the number one way that instructors could improve engagement and a feeling of connectedness in the course. He defined timely feedback as "prior to the next items being due."

Professor Oscar admitted that he had a situation in his most recent course where one of the instructors had a life situation develop which delayed grading. The instructors for all sections of his course had agreed that they would post grades at the same time, but

grades were not going back to the students as expected. Professor Oscar was well aware of the accelerated pace of the course and recognized the need for prompt grading. He stated that taking four days to grade questions was not acceptable.

While Hunter and Professor Oscar reported periodic delays in grading, instructor responsiveness, in general, received very positive comments from the majority of the students. Tony shared that the handful of times that he had reached out to professors that they had responded to him “as quick as can be.” Fred said he received very prompt responses from and had good interactions with faculty. He shared an instance when he sent an email to his professor at 11:00 pm and received a reply within five minutes. Anita was appreciative that the faculty had been very responsive with answering emails and was surprised when one professor responded to her email at midnight.

In her most recent course, Professor Linda had begun periodically adding informal videos throughout the course during the time it was in session to contrast with her more formal videos that were recorded prior to the course launching. The most recent time the course was offered, she held the role of master teacher but did not teach a section; she supervised the section leaders who taught all the sections of her course. As a master teacher who was not teaching and who did not have to grade assignments, she had more time to interact with students across all sections of her course. She had asked the students for feedback each week, and she tried to incorporate that feedback into her weekly videos. She also incorporated comments about what she read in the discussion board posts. While she did not participate directly in the online discussion, she commented in her informal videos about what may have excited her in those posts and sometimes addressed a current event. Additionally, she often cross-referenced a student’s

background such as job and title from their introductory videos and included that information when she shared the names of the students who made good comments. While it may have taken her at least an hour to review comments, email exchanges, and make note of the students' backgrounds, she usually recorded the video in one take without rehearsal while using her notes. She estimated that it took four or five hours for her to create videos for four sections of her course. Sections averaged about 22 students (William & Mary Online MBA, n.d.). While her students in previous courses had always been able to reach out to her through email, she said, "I feel like I'm able to have a personalized relationship with more of them simply because I get to post those videos." She knew they were watching the informal videos because the students communicated that they were appreciative when they heard her mention their names.

While Professor Robert and other instructors who taught his course responded to every "introduce yourself" discussion post for every student, like Linda, he did not respond directly to general discussion board posts. Rather, he engaged in dialogue with his students through the comments area of the discussion board which helped him get to know his students.

Bob felt that faculty who were obviously very much a part of William & Mary had a connection to campus which was contagious. Their enthusiasm for the university helped him feel connected. He shared that Professor Walley had done "something really cool." He recorded his lectures from various points on campus which gave a little insight and a little feel to what the campus would look like. Fred and Tony also mentioned those campus videos and made positive comments about them. Tony thought they were

pleasing to watch. He found them to be incredibly engaging just because the surroundings were different.

In addition to the tools that instructors used to develop an online presence and to respond to student inquiry, collaborative tools played an important role in offering students the ability to connect with one another. Similar to Professor Robert, Professor Linda viewed technology as a vehicle and not the end in itself. She stated that she thought the video conferencing tool that she used simply made it easier to have an experience of being in a classroom and having classmates. In addition to assigning complex challenges, Professor Robert showed his students collaboration tools that they could have used, but he allowed the groups to decide for themselves what worked best for them. Six students and two instructors made positive comments about Canvas and the ease with which they were able to use it. The technology was a vehicle which allowed students to interact and collaborate easily with one another.

***Interaction and collaboration.*** Students connected with one another through group work, collaboration, and sharing information. In particular, the opportunity to share personal information or specific information about their professional experiences helped students to connect. One of the first ways students began to get to know each other was through the “introduce yourself” videos that were required in each course. Fred and Jessica along with Justin and Hunter made positive comments about the introductory videos. Fred thought they were a good opportunity to refresh his memory. He referenced them quite often as he went through the program and as he was mixed in with different people in various classes.

Hunter estimated that 75-85% of the courses had significant opportunities for interaction with other students in both the discussion fora and in group work. He saw a lot of importance in collaborative work since there were few opportunities for synchronous online interactions. In the few classes where he did not have group work, he felt isolated and believed he missed out. He thought that working in groups was more important than participating in discussion fora.

Both Hunter and Jennifer had been concerned about potential honor code violations. At first, students were afraid to talk with each other about course materials outside of group work because of the honor code. Hunter did so only after they were clear that doing so would not be a violation. Jennifer found that students in her groups were doing a lot of teaching each other, and she enjoyed having group members she could lean on. She did not have that kind of group support in *Business Analytics* and felt uncomfortable asking certain people for help because she was unsure if doing so might violate the honor code. Jennifer felt it was important to have a group that she was comfortable talking to without fear of violating the honor code.

Jessica attended residency weekend early in the program and felt it contributed to her sense of community. She met a lot of people and built connections that lasted throughout the program. She said they met face-to-face one time, and they were texting almost daily from that point on throughout the two years in the program. She thought it was really powerful and said they all wanted to work together. Other students such as Bob and Anita who had not yet attended a residency at the time of their interviews lamented that they wished they had participated in residency earlier in the program. They felt that doing so may have helped them develop a stronger sense of community. Anita



believed that meeting people in person would help with bonding and felt that she might feel a little bit better in her next class after she had attended residency.

Many of the opportunities for students to connect and foster a sense of community came from group work and collaboration with others. The diversity of students in the program contributed to multiple perspectives and provided the opportunity to leverage their strengths and weaknesses. Fred stated that he had very great experiences with most of his groups, in particular, in the first course where they hit it off pretty well and each member provided some strengths. He also worked with a great cross-functional group in *Organizational Behavior* with people from different backgrounds and from around the world. He had high-quality connections with quite a few of his group members when he felt that they were investing in him and he was trying to invest in them. They wanted to help each other succeed, playing off their strengths and weaknesses and really feeling connected. Fred described students in his high-quality connections:

They're there to help you, not just to get something out of you, but they actually care. . . . It's not just getting a grade or a good grade, but that, that you can call them up, you know now and ask them for a favor, that they would help out. . . . It seemed like we were establishing that bond that you would have in a traditional brick-and-mortar, just sitting next to somebody for two years straight.

Bob also made connections through group work. He said it was cool to see everyone participate in the discussion forums, and he benefited from the points of view from businesses both similar and different from his own. He mentioned that at times, the discussions became a little stale when everyone was in agreement and had the same opinion, making it a challenge to think of something clever to contribute. He had worked

with two strong groups and appreciated the diversity among the group members. He had worried that he might be dead weight for his group in the quantitative classes where he struggled and felt good when he found areas where he was able to contribute. Bob described his interactions with others in the program as “positive.” He loved working in teams and stated that the support of and interactions with his group members helped to make him feel connected.

Similarly, Clint felt connected to his group members. It was more important to Clint for him to exceed the standard in his coursework so that he did not let his group down. That was more important to him than not letting the professor down. None of his group members wanted to let the other members down. His group was a diverse group who had connected early in the program and was still very connected to each other through group texts on their cell phones after they had graduated a year earlier. He stated he was closer to his colleagues from the online program than he was with those at the brick-and-mortar school where he attended. He had stayed connected with five of his colleagues from William & Mary, and they had been talking every week. “We know everything about each other. . . . They're great people. I would do anything for them. All they'd [have to] do is give me a phone call or text.”

It should be noted, however, between the time of Clint's initial interview and his follow-up interview two months later, the political climate in the country had negatively influenced the interactions of his group members. The diversity of the group extended not only to ethnicity but also to deeply-held, diverse political views. Some group members were quite conservative and very supportive of President Trump and his agenda while others were quite liberal. Their polarizing opinions of the President, the Kavanaugh

hearings, the Stormy Daniels coverage, and the caravan approaching the southern border of the United States made it difficult for Clint to discuss politics and rationalize with his group members. While they still connected with each other, Clint said he no longer talked with them about politics.

*High-quality interactions.* Jessica felt that she had the most high-quality interactions during group work. Hunter felt the synchronous online case study discussions were high-quality and very effective. Similarly, Jennifer described a high-quality interaction in her most recent class. She had a lot of group work, and she had really connected with one particular student. She felt they had positive interactions and that some of her group members regarded her in a more positive light. She definitely felt a mutuality of like respect for them and especially for the one group member whom she had connected with academically. She was excited about the possibility of working with that person again.

Tony described the interactions with his group in his last course as high-quality. His group included five students, three of whom he had no previous contact. He felt that the final paper they had just submitted was nothing short of outstanding. He said the paper was that good because of the high-quality interactions of the group which he attributed to everyone pulling for each other. One group member was abroad at the time. The group was highly-motivated to get a good grade, and all equally pulled their weight. Tony also appreciated the interactions that were possible with his professor who offered weekly online office hours. If a student had a problem, they knew the specific time that the professor would be available to speak with them. Tony experienced online office

hours near the end of his program and had not expected them before. He thought they were great and recommended that all faculty consider offering them.

Justin had what he considered one high-quality connection early in his first course with his first group. He attributed the high-quality to good communication and a shared sense of humor which made for a more casual, safe, and welcoming environment amongst the group. He felt that the group discussion boards offered somewhat of a closed environment and allowed the group members to be themselves a bit more than the discussion boards that included the entire class.

*Low-quality interactions.* Just as group work may have created opportunities for high-quality interactions, it also resulted in low-quality interactions for Justin. An unfortunate group experience occurred in his first course and quickly spiraled downward with very low-quality interactions among several of his group members. It happened shortly after his peers received negative, though honest, feedback in mid-term peer evaluations. The group then reached out to the professor; and ultimately, the program office became involved in looking for a resolution. Both the program office and the professor seemed to be taken by surprise by the unusual group dynamic which Justin attributed to negative feedback received during the mid-term peer evaluation requirement. He viewed that group experience as his greatest challenge in the program. He tried everything that he could to keep the group together and considered those interactions with group members as low-quality interactions that resulted in a hostile environment.

Other low-quality interactions that students shared most often involved group work when another student did not respond in a timely manner, had scheduling conflicts

or did not pull their weight. Clint's low-quality interaction involved a group member who did not submit their part of an assignment on time which upset him. Clint described the student as borderline selfish, but he said his group got the job done. That was his only mishap. He stated he never had any problems with anyone in the program.

Fred shared what he considered to be two low-quality interactions, one with a group member and one with a faculty member. First, one of his group members saw something that someone else had posted online stating that they received their undergraduate degree from a particular university and could not believe that they had been admitted to the program at William & Mary. The group member assumed that Fred had made the post since Fred had attended the same university, so he approached Fred and asked him if he had made that post. Fred felt the group member was putting him on the spot and questioning whether Fred was adequate for the program. Once Fred explained that he had not made the post, it was no longer an issue. Second, Fred received feedback on an assignment and was taken aback that the Professor focused more on his grammar and APA formatting than the course content. Fred stated it was the only time he felt from a faculty perspective that they were just there to get a paycheck rather than to improve his knowledge of the subject matter as it related to business.

Anita experienced what she considered a low-quality interaction when her group members, due to conflicts in schedules, met and planned a project without her. She was nervous that her lack of participation might impact her grade even though her group members told her, "it's not a big deal." Anita began to panic. She felt like the third wheel, keeping the group behind. She started staying up all night a couple of times in order to keep up. But in the end, everything worked out. She received the grade she expected.

On two occasions, B.J. became frustrated with another group member who displayed poor writing quality in their part of the group assignments. While feeling a bit uncomfortable in doing so, B.J. and a couple of the other group members felt it necessary to completely rewrite the other group member's work and stayed up all night doing so. They did not want to make the other group member feel bad, but they wanted a good grade. They were never really sure how the other group member felt about the extensive revisions they made. B.J. perceived this low-quality interaction to be his worst or least effective group experience in the program.

Hunter, on the other hand, had a hard time identifying a low-quality interaction within the program but stated that he might consider the lack of interactions with other students in the courses that had no group work as low-quality. He considered those to be low-quality, not because of the interactions themselves, but because the interactions did not exist.

Jennifer said she definitely had not had very many low-quality interactions, but she shared that a woman in her last group fought her on everything. Jennifer said that just talking to her was definitely draining. Jennifer felt a lack of safety because her grade was on the line, and the woman was combative at everything the group decided upon. That was definitely Jennifer's first low-quality interaction in the program, but she seemed to take it in stride. She said she knew that in life and in business that she would encounter at least one person who would fight her on things. "The majority of the people in the program are so supportive," she stated.

Tony experienced a low-quality interaction with a group member who texted him at almost midnight immediately after he had submitted his part of the assignment that was

due that evening. Rather than thanking Tony for his submission, the group member reminded him that he also needed to complete another task by Saturday, two days later. For Tony, that was “beyond depleting.” It was very late, and he was tired. He would have appreciated a “thank you.” He decided not to reply and simply moved on. Prior to that one incident, Tony said he was not sure he could have given an example of a low-quality interaction. He stated he thought the program had eclipsed every expectation he had at least so far in regard to the touch point. The people he had worked with had been nothing short of outstanding.

When asked about any low-quality interactions, Jessica said she had a hard time giving a specific example because she felt there was still some value in difficult interactions with students. She saw the challenges as opportunities for growth and recognized that they were a part of life. “At the end,” she said, “that’s what life’s about. There’s difficult people that you have to deal with and in the end, it’s all about how you interact . . . and . . . how you resolve the problem together.”

Anita and Jennifer differed on their opinion of whether disagreement in discussion boards fostered community. While Jennifer felt that disagreement in discussion boards helped to foster student engagement, Anita felt that it did not. In particular, in one course, they were asked to choose a discussion post with which they disagreed with and respond. Jennifer felt that the disagreement generated more conversations and more interactions within the class while for Anita, choosing a negative point of view did not foster bonding or community.

Based on the data from these participants, group work and other collaborative learning activities influenced student connectedness in the OMBA Program in a number

of ways. The structure of the group work and the perceived instructor presence influenced the development of community. Group work that required highly-collaborative, reciprocal interactions among group members contributed positively to student connectedness. In one course, 75% of the students chose to participate in optional group work. That indicated a level of connectedness among those group members, perhaps as a result of the professor's thoughtful creation of groups and equal distribution of prior subject matter experience across all teams. Of equal importance to the design of the learning activities were course facilitation and responsiveness of the professor. Prompt grading and prompt feedback to student inquiries reduced feelings of isolation and positively influenced a sense of connectedness. Faculty who were enthusiastic about William & Mary and who obviously had a connection to campus helped students to feel more connected to the university. The program offered a number of opportunities for students to connect and build community, often through group work. However, sometimes a double-edged sword, group work resulted in both high-quality and low-quality interactions among students, influencing connectedness in both positive and negative ways.

**Retention - RQ2c: How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program?** About 24% of the 174 students who responded to the survey indicated they had sometimes thought about leaving a course or the program or had left the program. Three of the 10 students who were interviewed had sometimes thought of leaving a course or the program. They attributed their desire to persist to the support they received from others in the program including their professors, tutors, group



members, and student success coordinators along with a perceived connection to the institution and of being informed of what to expect with regard to the level of difficulty of a course.

Bob's greatest challenge in the program had been time management. There were times when he considered dropping a course and putting his academic pursuits on hold for a few weeks due to his heavy workload and family obligations. After consulting with his student success coordinator, he decided to continue in a course that was difficult for him. He attributed his success to his wife who supported him and who helped him find the time he needed to focus on his coursework, and to his tutor whom he leaned on heavily during that time.

Group work influenced retention in the program. Clint shared that there was a point in the program where he almost "threw in the towel" and said he was going to shelve the MBA and pick it up later. He stated that when his group found out, they became so mad even though he was not doing the project with them at that time. They told him, "You can't let us down." Clint asked them why they would care if he was not doing a project with them anymore. They told Clint, "That's not like you. Why are you quitting?" Clint told them he was not quitting that he was simply shelving it for awhile because he was so busy at work. He felt he could finish later. The group members said to him, "Listen, you can't quit on us." As a result of the support he received from his group members, Clint persisted and graduated from the program.

Group work also influenced Tony's decision to stay in the program. He was most satisfied with the help and support he received from his group members, particularly in the early days of his first course when he found himself traveling for work and

overwhelmed with the amount of coursework during that time. As he was considering leaving the program, a fellow group member stepped up to lead and shepherded the group through the project. Not only was Tony able to lean on someone else to be the group leader, but he said a calming sense came over him with that. His professor was also fantastic. Tony reached out to him in the early days of the program to inform him of his hectic week. Tony stated, “His email back to me was as kind and professional and welcoming and supportive as could be.” In conjunction with the support he received from the first group leader, Tony said, “It’s been a great ride ever since.”

Hunter said he never or almost never thought of leaving a course or the program. He attributed his desire to persist to his campus visit early in the program. He walked through the Wren building and made an intentional commitment. He said once he made that commitment, he was not going to stop. “It had to be done.”

Although she said she never or almost never thought of leaving the course, Anita said she really was not happy in one of the more difficult courses. She stated that the support of her professor and being told that the course was one of the hardest in the program helped her get through. She felt that leaving would not have done her any good. In her words, “You are kind of in the middle of the ocean, and you’ve got to swim.”

According to the data from these participants, the following influenced retention within the program: (a) management of student expectations, (b) support from others, and (c) connection to the institution. Anita found it helpful to persist in a difficult course when she had been told that it was one of the hardest courses in the program. The support that Clint and Tony received from their group members positively influenced their decisions to stay in the program. Support from his student success coordinator and his

tutor helped Bob to get through a particularly difficult course. Lastly, Hunter's connection to the university positively influenced his decision to persist and graduate.

### **Summary**

This study explored student connectedness in the OMBA Program at William & Mary as measured by the OSCS (Bolliger & Inan, 2012). Of the 422 current and previous students who were invited to respond to the survey, 174 responded with a moderately-high average connectedness score of 4.00 which indicated that more students felt connected than not. Using the four subscales of the survey: comfort, community, facilitation, and interaction and collaboration, the study explored what in the learning experiences and collaborative work contributed to the student's perception of connectedness and desire to persist in the program. Instructor presence, the responsiveness of the high-caliber students and faculty, attending residency early in the program, and ease of use of the learning management system and collaboration tools played major roles in helping students to feel comfortable and build community.

Faculty helped to foster community by designing interactive learning activities such as live case discussions, complex group projects which required reciprocal interactions and high-level thinking among students, and discussion fora requiring both discussion and debate. By sharing information in their introductory videos, sharing multiple perspectives in collaborative work, and relating their work to others' work in the courses, students had opportunities to experience both high-quality and low-quality interactions. Paradoxically, group work offered the most opportunities for both. While the majority of high-quality interactions most often involved group work, low-quality group interactions were the main reason that one student left the program, and another dropped

a course. The support that students received from professors, tutors, student success coordinators, and other students in the program; the management of their program and course expectations; and their connection to the institution contributed greatly to the extremely high retention rate enjoyed by the program.

In the next chapter, I provide a brief overview of the study. In addition to discussing the summary and interpretation of findings, I offer implications for practice. I also share the strengths and limitations of the study and implications for research. Lastly, I provide a brief conclusion.

## **Chapter Five: Interpretation of Findings**

In this final chapter, I begin by reviewing the purpose of my study and the gaps in the literature. I discuss the summary and interpretation of findings as they relate to student connectedness in an online MBA (OMBA) program and the implications that may be beneficial to program administrators, professors, course developers, instructional designers, and students. Lastly, I share the limitations of the study, my recommendations for future research, and a brief conclusion.

### **Overview of the Study**

The OMBA market grew between 2015 and 2017 (GMAC, 2017), but the market is now stable. Despite the overall stabilization, 36% of OMBA programs reported an increase in application volumes over the past year while 58% reported a decline (GMAC, 2018). The market will likely remain competitive, and educators must continue to look for ways to offer quality programs that attract new students, retain them, and meet the changing needs of the workforce. An important indicator of program quality is attrition rates (Gabrielle, 2001). While attrition rates in online learning vary between 20 and 80% (Rostaminezhad et al., 2013), the OMBA Program at William & Mary enjoys a comparatively low attrition rate of less than 10%. Important factors for retaining students in an online environment are (a) social interaction (Boston et al., 2009) and (b) student

satisfaction (Weber & Farmer, 2012). Student connectedness positively correlates with course satisfaction (Liu et al., 2007) and is particularly important in an OMBA program where building a professional network is one of the benefits students have come to expect from the academic experience. MBA students who are working professionals often desire a promotion within their organization or wish to transition to a new job, and a strong professional network can help meet those goals. Previous research has focused on building community in a digital space (Conrad, 2005, Liu et al., 2007; Shackelford & Maxwell, 2012), but a gap remains in the literature as it relates to student connectedness and the quality of connections that potentially exist in a part-time OMBA program for working professionals. The purpose of this mixed-methods study was to explore the overall student connectedness in the OMBA Program at William & Mary and to answer the following research questions.

- 1) To what extent do current students and did alumni feel connected in their Online MBA Program at William & Mary?
- 2) What were the students' experiences of connectedness and the quality of those connections?
  - a. What in the students' experience of those learning activities were consequential to them that made them feel connected?
  - b. How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?

- c. How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program?

This mixed-methods study measured student connectedness by the results of the Online Student Connectedness Survey (OSCS; Bolliger & Inan, 2012). I invited all previous and current students in the OMBA Program to respond to the survey. I invited all faculty who had taught or who were teaching in the program to participate in a connectedness survey which consisted of questions similar to those from the OSCS but edited to appear from a faculty member's perspective. The results of the surveys informed the selection process for interviewing 10 students and four faculty members in one-on-one, semi-structured interviews for the qualitative portion of the study.

### **Summary of Findings**

In this section, I discuss the five major findings that answered the research questions asked in this study. The findings include: (a) on average, more students in the program feel connected than do not, (b) comfort in the online environment and a sense of community are consequential in helping students feel connected, (c) educators can positively influence student connectedness by designing collaborative work and learning activities that take into consideration course and program structure, instructor presence, and collaborative tool options, (d) students can positively influence student connectedness by participating in collaborative and group work that provide avenues for them to share information and potentially develop high-quality connections, and (e) management of students' expectations, their connection to the institution, and support from others positively influence their intention to persist in the program.

**RQ1: To what extent do current students and did alumni feel connected in their Online MBA Program at William & Mary?** The results of the 5-point Likert scale OSCS (Bolliger & Inan, 2012) revealed a moderately-high average online student connectedness score of 4.00. More students felt connected than not. I chose to interview a sample of 10 students who were representative across the continuum of least-connected to most-connected as measured by the OSCS. By examining the experiences of students across the continuum, I was able to look for patterns in the learning activities and explore what may have contributed to or detracted from a feeling of student connectedness.

**RQ2: What were the students' experiences of connectedness and the quality of those connections?**

*Connectedness - RQ2a: What in the students' experience of those learning activities were consequential to them that made them feel connected?* Comfort and community are two of the four subscales from the OSCS, and they play a key role in influencing students' feelings of connectedness. For students to engage with one another, they must feel comfortable in navigating the online learning environment and feel free to express themselves. More than half the students who were interviewed made positive comments about the learning management system, Canvas, without being asked specifically about it. They said it was very effective; some said they loved it, and others said it made for easy communication with professors.

The structure of the program and the caliber of the students who were admitted played important roles in students' comfort levels and in building community. Clint said that the maturity level of his colleagues contributed to his comfort level while Jennifer felt that her level of comfort stemmed from the support she received from student advisors, professors, and her group members with whom she was able to lean on. The



flexibility of the program contributed to the comfort levels for Fred and Justin. Hunter was comfortable with navigating the online environment, with the student bios that helped kick off each course, and with the academic experience in general. Some students felt that if they had attended residency earlier in their program, they would have been more comfortable reaching out to others and could have potentially built community more quickly and easily. In fact, Jessica attended residency early in her program and stated that it helped her to build relationships that lasted throughout the program.

In the first course, professors offered students a number of collaborative tools and required that they work together to solve an ambiguous, complex challenge which extended over several weeks. Groups were free to choose the technology platform they felt most comfortable using to complete their projects. All four faculty members who were interviewed stated that they strove to create a safe online learning environment where students felt comfortable and free to express themselves. In addition to various group work assignments, students engaged in learning activities such as asynchronous discussion boards and synchronous online case discussions.

Responsiveness helped to build social presence and was critical in building online community (Palloff & Pratt, 2007). One of the greatest contributors to building community in the program was the timely responsiveness of both students and faculty. Eighty percent of the students who were interviewed expressed positive thoughts regarding the responsiveness of professors to their inquiries. Fred was pleasantly surprised at 11:00 pm one evening when he received a reply from a professor within five minutes of his email inquiry. He felt the professors were equally as eager to teach their online students as those in a traditional classroom.

Meeting classmates and faculty members on campus in person, and meeting group members online and getting to know them through collaborative work helped Hunter perceive a sense of community. He built relationships as he talked with other students about course content and related it to their jobs. Justin felt the courses were well-designed to promote engagement, foster collaboration, and build community. He also thought, however, that the student should accept some responsibility and take action to build community within the program.

Since 80% of professionals believed professional networking was important for career success (LinkedIn Corporate Communications Team, 2017), and 70% of professionals who were hired by a company in 2016 had already established a connection there, it was not surprising that Hunter and Tony took responsibility to foster community outside the course. Hunter was one of three students who mentioned that they connected with group members through LinkedIn. Hunter's group also had a LinkedIn group page, and approximately 60 students connected with him on that platform. Similarly, Tony said that approximately 50% of his group members had connected with him on LinkedIn, and about 20% of those connections had a desire for more career information. Tony felt that type of camaraderie would not exist if it were not fostered internally, and collaborative work helped to promote that.

***Collaborative work and learning activities - RQ2b: How and to what extent did collaborative work and other learning activities influence student connectedness in the Online MBA Program?*** Collaborative work or group work was the most influential of all the learning activities for building community and fostering student connectedness in the program. Through effective facilitation of learning by the professors (in both course

design and course facilitation) and through participating in learning activities that promoted interaction and collaboration, the students had numerous opportunities to connect with one another and to develop relationships. Jessica felt that most of the high-quality connections that she experienced as defined by Dutton and Heaphy (2016) had initiated in group work. Three of the four faculty members who were interviewed said they required group work in their courses and indicated they had been very thoughtful about how they designed it in their courses.

Looking to offer students opportunities for rich discussions through learning activities that required higher level thinking skills, professors were deliberate in designing courses with clear instructions for solving ambiguous and complex challenges. Professor Robert felt that the collaborative nature of the group work required in his course contributed positively to the student connectedness that almost always developed in each of his classes. Often, the students remained connected throughout the program and beyond graduation. Professor Oscar had also thought carefully about group work in his class. He designed mandatory group work during the first week of his course and optional group work in each remaining week. He thought that about 75% of his students chose the optional group work over individual work. He said their discussion board posts indicated that the students had come to know each other and had established a good rapport. They expressed interest in each other as individuals.

Professors fostered connectedness with their students by being responsive and present in the online environment. While it is not unusual for online students, in general, to feel isolated (Palloff & Pratt, 2007; Phirangee, 2016), that was not the case for Tony in this program. He received a response from his professor within 11 minutes on a Sunday.

He said the timeliness of the response was nice, and it helped him feel like he was not alone on an island. The technology made it easy to develop an online presence and to make those connections, but it is important to note that the professors often viewed the technology as a vehicle and not the end-in-itself. Professor Linda said the technology made it easy to engage in learning experiences similar to those in a classroom. The design of the learning experience influenced the effectiveness of the experience and the extent to which it may have fostered connectedness and built community.

Hunter thought that professors included significant opportunities for students to interact with other students in about 75-85% of his courses through group work and discussion fora. He placed a great deal of importance on collaborative work and felt he missed out when it was not an option, which resulted in a feeling of isolation. The residency weekend offered students the opportunity to connect face-to-face, and for Jessica, it afforded her the opportunity to forge relationships with students that lasted throughout the program. Bob and Anita had not yet attended a residency at the time of their interviews; but both wished that they had attended one earlier in the program, feeling that it would have made it easier for them to reach out and connect with others if they had first met them in person.

***Retention - RQ2c: How and to what extent did opportunities for students and/or alumni to connect with others in the program influence their intention to persist in a course or the program?*** Less than 24% of the 174 students who responded to the survey indicated that they had ever thought about leaving a course or the program. Two of the 10 students who were interviewed had thought about leaving, and one student had left the program. The quality of the connections in group work played a major role in influencing

retention both positively and negatively. The challenges of coordinating group work became so problematic for B.J. that he decided to leave the program due to a change in personal circumstance and the need to spend more time with his family. Justin left a course due to his unfavorable experience with group work. For Clint and others, however, group work played an important role in their desire to persist. The support of professors, student success coordinators, tutors, and group members positively influenced their decision to continue in the program.

In addition to the support of others in the program, the student's commitment to the institution and knowing what to expect in their courses helped them to persist. Hunter was intentional about visiting campus when he attended some of the special events at the beginning of his program. He made a commitment to himself early in the program that he would complete it. He said once he did that, he was not going to stop. Anita persisted through a very hard course with the support of her professor and being told that it was the most difficult course in the program. She said knowing that it was the hardest course helped her to persevere.

### **Interpretation of the Findings**

The four subscales of the OSCS (Bolliger & Inan, 2012): (a) comfort, (b) community, (c) facilitation, and (d) interaction and collaboration guided the generation of the initial a priori codes used in the qualitative analysis and later as a foundation for the thematic network of this study. Figure 5 shows the themes that aligned with the research questions. No one theme superseded another theme as a primary solution for building student connectedness. Rather, each theme contributed to the weaving of a tapestry of components that when used collectively, positively influenced online student

connectedness and helped build community. I describe each theme in detail; and lastly, I propose a new conceptual framework which combines the Online Student Connectedness framework with the Community of Inquiry framework.

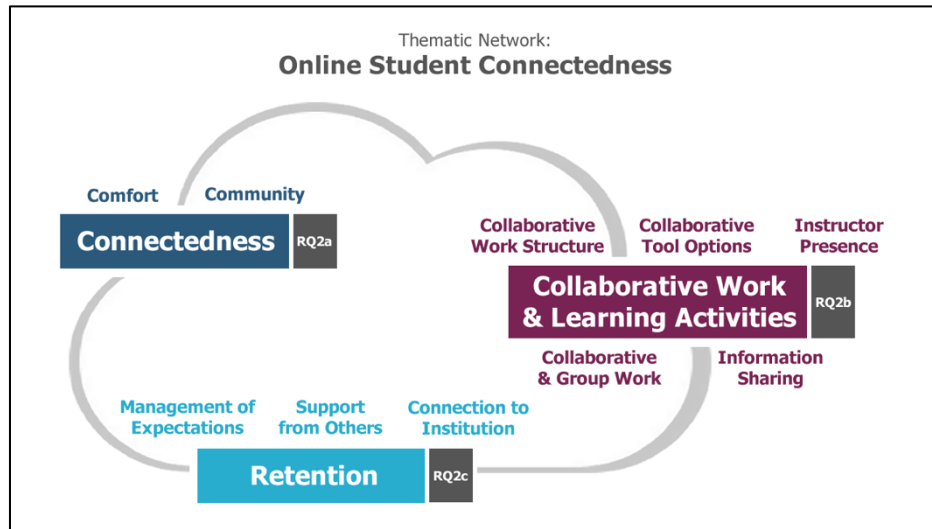


Figure 5. Thematic network: Online student connectedness (RQ = Research Question)

**Comfort and community in promoting connectedness.** As stated previously, a feeling of comfort and a perception of a community were important factors in fostering student connectedness. All of the professors who were interviewed worked to create a safe online learning environment where students felt free to express themselves. In doing so, students were more likely to interact with their peers and instructors (Shin, 2003) and were less likely to miss educational opportunities (Bolliger & Inan, 2012). Students were very comfortable with the learning management system, Canvas, which allowed them to easily connect with one another as they developed social presence by presenting themselves as human beings in the online environment (Picciano, 2002; Richardson & Swan, 2003; Rovai & Barnum, 2003). This study confirmed that social presence was a key component in building online community (Palloff & Pratt, 2007). Instructors and students developed social presence by being responsive to each other and by interacting

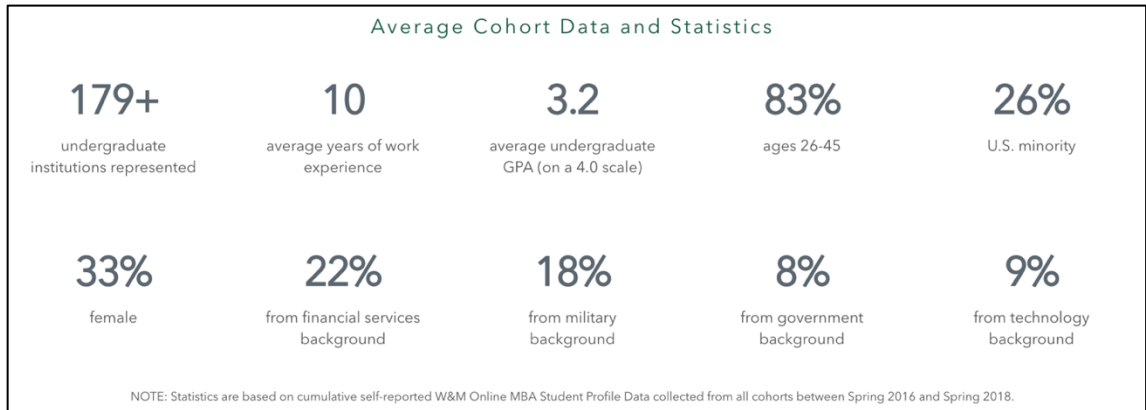
and communicating with each other online, mainly through group work and discussion fora. Social presence and teaching presence are two of the three interdependent elements of the Community of Inquiry theoretical framework (Garrison et al., 2000) which I discuss in more detail later in this chapter.

### **Collaborative work and its structure, tool options, and instructor presence.**

Professors played a major role in creating and facilitating learning activities that promoted connectedness through the structure of their courses, the tools they made available to students, and their development of teaching presence. Many of the group learning activities in the OMBA Program were designed in ways that promoted cognitive presence, social presence, and teaching presence which are the three interdependent elements of the Community of Inquiry framework (Garrison et al., 2000) needed to create meaningful collaborative learning experiences for students.

The framework's element, cognitive presence, refers to the extent to which students make meaning through sustained communication. The ambiguous or complex group projects which required reciprocal interactions as defined by Thompson (1967) and higher-level thinking skills among group members were rich opportunities for students to develop a cognitive presence. The first course, in particular, required that students work together over several weeks to solve an ambiguous and complex challenge. Coupled with the fact that all students were new to the program and were becoming acclimated to the online environment, the challenge in the first course provided what may be considered a "shared ordeal" or rite of passage (Howey & Zimpher, 1989). While the course developer may not have intended to create a "rite of passage" in the first course, the group work was instrumental in fostering student connectedness and high-quality connections for at least

half of the students who were interviewed. When asked how his group developed the bond that held them together, Clint responded, “I guess we shared so much pain and suffering through the MBA program for the two years and it was just fast-paced and we just, we motivate each other.” The “pain and suffering” that Clint’s group shared could be considered a “shared ordeal” that helped foster his connectedness to the other students.



*Figure 6.* Average cohort data and statistics. Reprinted from The William & Mary Online MBA. (n.d.). Retrieved from <https://online.mason.wm.edu/mba#profile>

Specific course design and the program structure helped students make successful connections as they worked together collaboratively. Fred and Hunter each spoke of the caliber of students in the program. They felt that the admissions criteria for students in the program contributed to the effectiveness of group experiences both in terms of the students’ willingness to put forth the effort required of such a challenging program and in the quality of the contributions that students made when they discussed how course content related to their professional experiences. Those types of discussions align with the social constructivist paradigm where students participate in peer-to-peer learning and share diverse expertise and valuable experiences with one another (Rovai, 2004). Figure 6 shows the diversity of the students and sheds light on the variety of contributions that



students could have potentially made when they shared their professional experiences with others in the program. Social constructivist theory (Dewey, 1938; Palloff & Pratt, 2007; Piaget, 1969; Rovai, 2004; Vygotsky, 1978, 1986) is an important element in the Online Student Connectedness conceptual framework that I used to frame this study. Social constructivist theory and adult learning theory (Knowles, 1992; Knowles et al., 2015) when used appropriately can positively influence the four factors of Online Student Connectedness which are (a) comfort, (b) community, (c) facilitation, and (d) interaction and collaboration (Bolliger & Inan, 2012), all prominent elements in the themes that emerged in this study.

In applying social constructivist theory and the Community of Inquiry framework (Garrison et al., 2000), professors offered an array of technology platforms and tool options that students used to collaborate. Students and faculty found the learning management system easy to navigate and helpful in making connections with others in their courses. By effectively using those tools, instructors developed teaching presence, the third element of the Community of Inquiry framework (Garrison et al., 2000), by being responsive to questions and offering frequent feedback to their students. Timely responsiveness contributed to feelings of positive regard and of mutuality, two of the elements of high-quality connections as described by Dutton and Heaphy (2016). Teaching presence also aligned with the facilitation of learning subscale of the OSCS (Bolliger & Inan, 2012) and helped to foster connectedness.

**Sharing information through collaborative and group work.** Of all the learning activities that students participated in, group work had the greatest potential to influence student connectedness and did so in both positive and negative ways. While a

couple of students who were interviewed expressed extreme challenges with group work, every student who was interviewed made positive comments about working with others. A major finding of this study showed that 50% of the students cited group work in the first course as being their best or most-effective group experience, offering opportunities for high-quality connections as defined by Dutton and Heaphy (2016). Students built community through collaboration and group work. The introductory bios within each course were similar to opportunities suggested by Slagter van Tryon and Bishop (2009) in their proposed course design framework to observe individuating social characteristics among students. The bios provided a venue for students to share information and to learn more about one another. As a result, the bios helped to foster student connectedness.

Jessica spoke of the different types of interactions with her groups, where some groups would work together and talk several times a week while other groups would divide the work without talking about it and then submit it to one person to compile at the end of the week. If the group members were not engaged with one another and communicating about the project, it was unlikely that they were building community or feeling connected. Jessica's experience does not support the work of Skilton et al. (2008) who attempted to decouple project complexity from reciprocal interaction. While they suggested that it was more likely that complex projects would require reciprocal interaction, Skilton et al. purported that projects that could be divided easily might also have reciprocal interactions. That may be possible, however, that was not the case in this study with Jessica, Jennifer, or with B.J. Jessica did not have any negative comments about what Thompson (1967) would characterize as her pooled interactions. However, another significant finding of this research is that both Jennifer and B.J. indicated that

their least effective group experiences involved dividing the work rather than engaging as a group and working on it together.

The high-quality connections (Dutton & Heaphy, 2016) made through group work promoted the camaraderie that Tony felt was fostered internally. Tony's desire and that of his group members to connect with each other on LinkedIn displayed at least two of the three characteristics of high-quality connections: (a) a sense of positive regard and (b) a feeling of mutuality. The high percentage of students who chose optional group work over individual work in Professor Oscar's class was likely an indication that they had experienced high-quality connections in previous group work and were hoping to benefit from those types of connections again.

Of the three faculty members who were interviewed and who assigned group work in their courses, they indicated that they designed collaborative work in ways that it could not be easily divided or completed individually. As the program was a completely online program with the exception of the weekend residency, Oguz and Poole (2013) would consider it as having a high degree of online components and limited face-to-face interaction. Their study suggested that students in programs with such limited face-to-face interaction would not develop a sense of community which supported them through the program and beyond graduation. That was not the case for Jessica or Clint. While they attended a residency weekend, most of the interactions that they had with their peers were online. Unlike the participants in the study by Oguz and Poole (2013), Jessica and Clint developed strong bonds with their group members that persisted throughout the program and after graduation. Clint's connections with his group also exhibited characteristics of high-quality connections as described by Dutton and Heaphy (2016).

While his group disagreed on political issues surrounding the most recent presidential election and had chosen to no longer discuss politics, they were able to withstand that setback which is considered a characteristic of high-quality connections. Clint and his group remained connected after graduation and continued to communicate, though not about politics.

Collaborative work offered students a variety of opportunities for making high-quality connections that fostered community. The quality of the connections that resulted from the various types of carefully designed collaborative learning activities may highlight a new understanding of how educators can foster online student connectedness. Creating complex challenges that require reciprocal interaction and the sharing of personal and professional experiences may be key to designing the type of collaborative work that will have the greatest potential for students to make high-quality connections that help build a strong community.

Professor Oscar sought to build community among his students through group work by asking his students to share how the course topics were relevant to their professional life or to the life they aspired to have. Professor Linda asked her students to give feedback to and receive feedback from their peers as they worked on their individual projects. Those exchanges promoted student connectedness as suggested by Bolliger and Inan (2012) where students discussed ideas, collaborated with others, and related their work to the work of others. Those types of interactions also aligned with adult learning theory which purports that students' experiences are rich resources for learning, and adults learn better when their learning is organized around their life experiences (Knowles et al., 2015). This combination of strategies has not been identified collectively

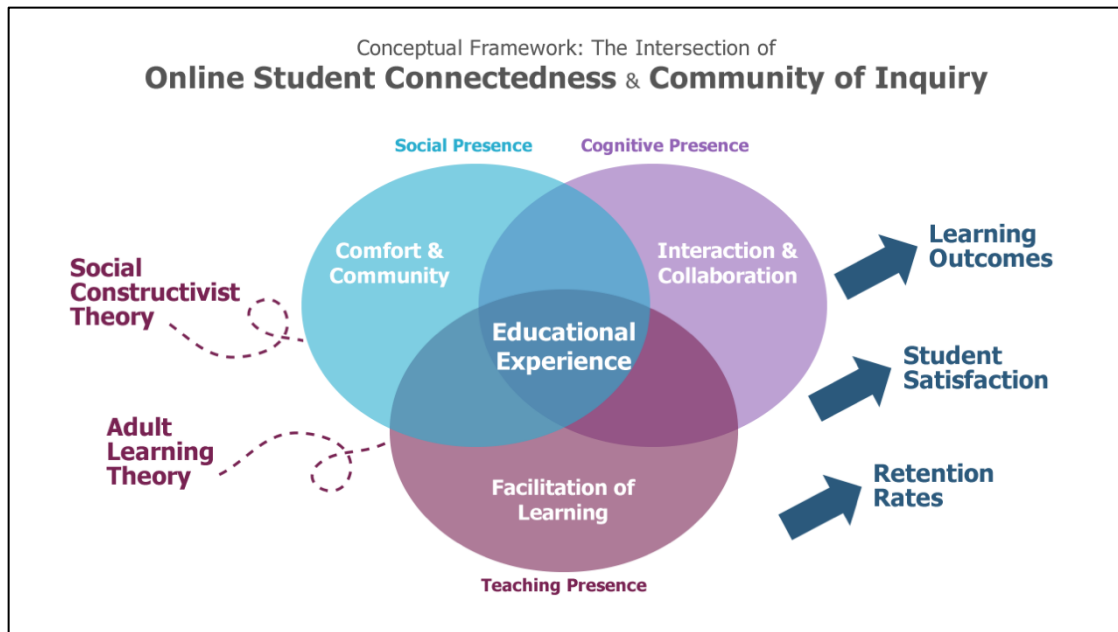
in the literature and presents a new contribution to the understanding of how to foster online student connectedness in a professional graduate program. By systematically applying social constructivist theory and adult learning theory, educators can create online learning activities which require students to solve ambiguous or complex challenges through reciprocal interactions and in doing so, can foster high-quality connections and likely increase student connectedness. In this study, adult learning theory and social constructivist theory are important elements of the Online Student Connectedness conceptual framework that were purported to foster online student connectedness and ultimately increase student satisfaction and retention rates.

**Retaining students through the management of expectations, connection to the institution, and support from others.** The high retention rate within the program can be attributed to (a) a sense of knowing what to expect in the course or program; (b) the student's connection to the institution; and (c) perhaps most importantly, the sense of community that developed from high-quality connections and the support of others including professors, tutors, student success coordinators, and group members. Knowing what to expect in the most difficult course in the program helped Anita to persist. Not knowing what to expect regarding group work may have contributed to the challenges that B.J. and the students in Justin's group experienced. Whether it was their expectations or the expectations of their group members that were misaligned with reality, group members would have been better served if they had a realistic idea of what to expect in a course and how to resolve potential issues. While Justin eventually left a course and B.J. left the program because of low-quality connections and/or challenges that involved group work, other students said that one of the main reasons they persisted was the

support they received from their group members. That support speaks to the student connectedness and sense of community that came from the high-quality connections and camaraderie that developed among those who collaborated with and supported each other as they worked towards a common goal.

Lastly, each student's perceived connection to the university played a role in their desire to persist. Jessica's group began wearing William & Mary shirts as they Skyped during their group meetings which were a physical representation of their connection to the university. Both Jessica and Hunter were proud to attend William & Mary. Hunter had visited campus early in his program and made a commitment to himself to finish. He said that once he got into William & Mary, there was no way he was going somewhere else.

**Intersection of Student Connectedness framework and Community of Inquiry framework.** Figure 7 shows how the Student Connectedness framework might be combined with the Community of Inquiry framework based on the findings of this study.



*Figure 7. Conceptual Framework: The Intersection of the Online Student Connectedness Framework and the Community of Inquiry Framework. Adapted from “Development and Validation of the Online Student Connectedness Survey (OSCS)” by D. U. Bolliger and F. A. Inan, 2012, *The International Review of Research in Open and Distributed Learning*, 13, p. 41. CC BY 3.0.; and *Thinking Collaboratively: Learning in a Community of Inquiry* (p. 59), by D. R. Garrison, 2016, New York, NY: Routledge. Copyright 2016 by Taylor & Francis. Adapted with permission.*

Through the application of social constructivist theory and adult learning theory, professors created an effective learning environment through course design and course facilitation and developed their teaching presence as depicted in the lower circle in Figure 7. By creating a safe learning environment, students became comfortable in expressing themselves, thereby fostering community and developing social presence as illustrated in the upper left circle of Figure 7. Through interaction and collaboration, students developed cognitive presence as they made meaning through discourse which is illustrated in the upper right circle of Figure 7. The three circles overlap, representing the interdependence of all elements of both frameworks. The design and facilitation of a course can promote teaching presence, but they also influence whether students feel

comfortable interacting with one another to build community, social presence, and cognitive presence. Likewise, the interaction and collaboration that might promote cognitive presence, and the comfort and community that might promote social presence overlap as they are interdependent. At the center of the image in Figure 7, the three circles overlap which represents the student's educational experience as shown in the Community of Inquiry framework. The results of applying the elements of both frameworks include: (a) improved learning outcomes, (b) improved student satisfaction, and (c) improved retention rates.

### **Implications for Practice**

The results of this study have implications for potential positive online graduate education change on a number of levels including program and curriculum development; course development, design and facilitation; and the student's academic experience. In addition to program and course design, educators should consider the importance of course facilitation and how it influences the student's desire to connect with others and build community. Next, I offer a number of considerations for program administrators, educational leaders, course developers, course designers, course facilitators, and students.

**Considerations for program administrators and educational leaders.** Online program administrators and educational leaders are in a unique position to positively influence student satisfaction and retention rates by considering a number of program characteristics that can foster online student connectedness. They include (a) program structure and flexibility, (b) the effectiveness of the learning management system and overall course design, (c) policies for requiring group work (d) admissions standards, (e) teaching standards, (f) students' connections to the institution, and (g) a student support



network. Program administrators can set the tone for building community and online student connectedness from the moment the program is conceived.

***Program structure and flexibility.*** The structure of the program including the flexibility that the online format offered was one of the main characteristics that promoted a level of comfort within the OMBA Program. Comfort was one of the subscales of the OSCS (Bolliger & Inan, 2012) and a theme that emerged in this study in helping students to foster student connectedness. Working professionals who had hectic work schedules, often including travel, and who had family obligations at home were comfortable with and appreciated the flexibility that the program offered in its mostly asynchronous online format.

***Effectiveness of the learning management system and overall course design.*** In addition to flexibility, more than half the students interviewed expressed comfort with the learning management system, its ease of navigability and their ability to connect with others in the online environment. While the learning management system is not the end-of-itself, it is an important vehicle that is needed to replicate a classroom in a virtual space. Program administrators should consider promoting consistency in the design or layout of the courses throughout the program. As students quickly become familiar with their online environment, they can more easily focus on their learning objectives and on connecting with their peers rather than becoming concerned with learning how to use the technology or navigate a new or different course design. The technology should support their learning rather than impede it.

***Policies for requiring group work.*** Technology also supports students' learning through its application in group work, another theme that emerged as important for

promoting connectedness. Program administrators may want to consider developing guidelines around requiring or strongly encouraging faculty to design group work that attempts to build community within each of their courses. The ambiguous and complex challenge that was presented to student groups in the first course of the OMBA Program may have been a “shared ordeal” (Howey & Zimpher, 1989) which helped promote student connectedness. Regardless, the groups that formed in the first course often made connections that lasted throughout the program and beyond graduation. While group work may not be necessary for all courses, the results of this study strongly suggest that properly designed group work can positively influence online student connectedness in the program, particularly when implemented within the first course as a “shared ordeal.” For half the students interviewed in this study, their most-effective group experience occurred in the first course of the program.

Students often made high-quality connections through group work; but inevitably, low-quality connections sometimes emerged. Faculty may desire for students to work through any group challenges and complete their project as a group. However, there may be an art to knowing when to expect the group members to solve their own problems and when to intervene before group dynamics deteriorate beyond repair. The professor should encourage students to solve their challenges themselves, but the professor should also be prepared to intervene quickly amid severely deteriorating relationships between group members due to personality conflicts or differences in learning preferences. On the rare occasion that a group continues to experience low-quality connections, the program should have suggestions for the faculty member and for the students on how to approach those differences and work past them to complete the assignments. The program should

also work to develop suggested procedures for placing students in diverse yet compatible groups.

***Admissions standards.*** The diversity of and the caliber of the students emerged as a theme in this study that promoted student connectedness and should be considered when developing admissions criteria. The diverse career backgrounds of the students made for more interesting online discussions and allowed students to learn from each other's experiences. The caliber of the students and their willingness to tackle the work required in a challenging program also contributed positively to the quality of the group experience.

***Teaching standards.*** In addition to standards for student admissions, the results of this study suggested that standards for facilitating courses should be consistent across the program. Faculty members should be familiar with the requirements of teaching including (a) the expectations for responsiveness and timely feedback to the students, (b) how to set the tone for online communications, and (c) the expectations for grading. Students in the OMBA Program tended to communicate across all courses and sections, and programs should strive for students to have similar experiences regarding course facilitation in all courses.

***Students' connections to the institution.*** Program administrators and curriculum developers may wish to consider a residency requirement early in the program to foster student connectedness and to help students connect with the institution. The connection that Hunter made to the institution early in the program helped him to persist. Program administrators may also consider providing institutionally-branded apparel to students early in the program to promote school spirit. Jessica's group wore their William & Mary

shirts while Skyping which was a visible sign that they were connected to the university, and it helped to build community. Additionally, the program should consider ways in which online students, if they desire, can engage in on-campus activities by informing them of events and providing them with easy access to information about how to participate.

***Student support network.*** Lastly, students will occasionally need additional support from the program to ensure their success. Students in this study appreciated the availability of a tutor which helped them to persist in the more difficult quantitative courses. Students also needed occasional technical help with technology and software downloads. The student success coordinator played an important role in answering students' questions and helping them to persist in the program. Online students can sometimes feel isolated (Palloff & Pratt, 2007; Phirangee, 2016), and they should be able to find help when they need it.

**Considerations for course developers and instructional designers.** Course developers and designers play a major role in potentially building online community and retaining students. Through creating engaging learning activities that promote student connectedness and potentially high-quality connections, they can improve student satisfaction and retention rates. This study suggested that considerations for doing so include (a) creating intuitive and easy-to-navigate online learning environments that provide safe spaces for students to feel free to express their ideas, (b) creating collaborative learning activities that promote student connectedness and foster high-quality connections, (c) offering technology options and appropriate support for the technology that students use to connect and collaborate with each other, and (d) fostering

a connection to the institution. Proper course design is integral to the success of building an online community and to effectively facilitate the online course.

This study suggested that students and faculty felt comfortable navigating the online learning environment which contributed positively to fostering student connectedness. Instructional designers should consider the ease with which students will be able to navigate the course, and course developers should consider ways to promote a feeling of safety and freedom of expression among students. Professors in this study were both explicit and implicit in promoting a safe learning environment. They often explicitly shared their expectations for a safe learning environment in their syllabi. Additionally, one professor chose to express some level of vulnerability in her course videos and her desire to learn from the students' experiences which helped to humanize her. By doing so, she implied that the learning environment was a safe space for sharing.

Course developers should consider designing group work and collaborative learning activities that offer opportunities for students to experience high-quality connections through reciprocal interactions over a period of time. Depending on the type of interaction, high-quality connections may happen very quickly as in the almost immediate responses that students received from their professors outside of normal business hours. However, the findings of this study suggest that four to eight weeks of reciprocal group activities may offer an optimal opportunity for students to develop high-quality connections that endure. The group work, which lasted 7.5 weeks in the first course of the OMBA program, was perhaps the best and most effective example of such activities in the program. By applying social constructivist theory and adult learning theory, the course developers created an ambiguous and complex challenge that spanned

the length of the course. Due to its complexity, the assignment had very clear instructions and weekly formative assessments. Professors placed students in groups based on their responses to a learning preferences survey. They collaborated online choosing from an array of technologies that the professor recommended. The complex challenges promoted cognitive presence, one of three elements of the Community of Inquiry framework (Garrison et al., 2000). In addition to developing cognitive presence, course developers should create opportunities to develop social presence and teacher presence, the two remaining elements of the framework. Activities that require students to create bios, share personal information, and relate course content to their professional situation allow them to learn about each other and view each other as human beings, thus promoting social presence.

The results of this study also suggest that students will benefit from other types of collaborative work which include sharing personal experiences, relating course content to their professional life, asking for and receiving feedback from their peers, and participating in activities that promote peer-to-peer learning. While some courses may be better suited for group work than others, course developers should consider offering optional group work to meet the needs of the students who benefit from social interaction and peer-to-peer learning. Course developers should also clearly state for each assignment what types of interactions are acceptable and unacceptable regarding the Honor Code regardless of whether group work is required, optional, or prohibited.

**Considerations for course facilitators.** Course facilitators interact with students while the course is in progress and have a great deal of influence on the student's online learning experience. They should leverage their position to foster student connectedness

by (a) developing teacher presence and setting a positive tone for the course, (b) having a plan to guide students through potential challenges of group work, and (c) showing their enthusiasm for and connection to the institution. Sometimes, the online course facilitator is also the course developer and a tenured faculty member at the university. Often, however, the course facilitator is a faculty member employed from another institution. The results of this study offer considerations for both.

Course facilitators should consider building teacher presence through a variety of modalities such as (a) presenting a friendly and supportive tone, (b) monitoring discussion fora and guiding students as needed, (c) making textual or informal video announcements, (d) responding to student inquiries as quickly as reasonably possible and at least within 24 hours, and (e) giving timely and substantive feedback on assignments. Course facilitators have a great deal of power and can foster or impede student connectedness through their actions. Perhaps most important is the tone in which the course facilitator communicates, reiterating that the learning environment is a safe space and that they are available to help their students. While it is important for course facilitators to monitor discussion fora to ensure that the online conversations are respectful and appropriately aligned with course content, it is equally important that students understand why they may be asked to change how they interact with others online. If the student perceives that they have been reprimanded for reasons that they do not understand, the result will likely be detrimental to student connectedness for all students in the course.

Course facilitators should consider making regular announcements to develop teacher presence and foster connectedness. Announcements can be delivered in textual,

audio, or video format. While no one format emerged as being most effective, Jessica, Jennifer, and Fred made positive comments about the video format. Professors often delivered instructions via video which Jessica appreciated because it made her feel like she was in class. While Jennifer felt that video and text could communicate the same thing, she acknowledged that she was able to observe more personality in a video; but she could see the benefit of both formats. She thought the professors' videos were really helpful because they compensated for the lack of face-to-face time. Fred appreciated the different formats that reached the various learning styles, whether professors taught via video from locations on campus or if they had books that were relevant to the course content. The findings in this study suggest that while video captures more of a person's personality than does text or audio, course facilitators should consider using a variety of formats to make announcements. However, perhaps more effective than announcements, responsiveness to students' inquiries is likely to be the best way for course facilitators to foster connectedness with their students. The results of this study suggest that when facilitators respond to student inquiries in a timely manner, especially outside of regular working hours, students feel less isolated and more connected.

In addition to being responsive to student inquiries, course facilitators can build a teaching presence by providing timely and substantive feedback on assignments. It is critical, particularly in an accelerated online course, that students receive their grades in time to digest the feedback and apply what they learn in their next assessment. In addition to the timeliness of the feedback, the quality of the feedback is important. The results of this study suggest that adult students desire more than just their grade. They want to understand how they can improve their work. Course facilitators have an opportunity



when grading assessments to give quality feedback that not only adds to the student's knowledge of the subject but nurtures the connection between student and teacher.

Group work is an important component for building online student connectedness, but it is not without its challenges. The results of this study indicate that, though rare, there are times when group work impedes student connectedness. This may happen because of conflicting personalities or conflicting schedules among students. Some of the challenges of group work may be mitigated by managing expectations before group work begins and by surveying students prior to placing them in groups. Facilitators who require group work should consider asking students about their learning preferences and placing them in groups where they are matched with others who desire to study on similar days and at similar times. On those occasions when group work results in poor group dynamics and students desire to work alone rather than continuing with their group members, course facilitators should be prepared to intervene early and counsel students through the project to completion or have some solution for those students who desire to leave a group.

Lastly, course facilitators, particularly those who may be adjuncts and who may not be familiar with campus should show their enthusiasm for and connection to the institution in which they are teaching. The results of this study suggest that students are keenly aware of the faculty members who are connected to the institution and those who are not. Faculty enthusiasm is contagious. Students feel more connected when the faculty member appears enthusiastic about and connected to the institution.

**Considerations for students.** Another implication of this study's findings is in the area of the student's experience. Especially for those students who are not familiar

with online learning, the results of this study suggest ways in which students may improve their academic experience through an openness to and fostering of student connectedness. Students should consider ways in which they can become familiar with the culture of the university and the expectations within the program. One student's advice to students was to "Use your resources; use your tools. Technology makes everything easier."

Another consideration for students is the opportunity to participate in group work. One student stated that she knew a lot of people who hated group work, but it helped her to form the connections that she kept throughout the program. She liked the classes that had group work more than the ones that did not. If group work is an option for an assignment, students should consider its benefits. By sharing personal and professional experiences that help them view each other as human beings, students can begin to foster student connectedness which may ultimately improve their satisfaction and desire to persist in the program. Perhaps most important in fostering connectedness is the element of responsiveness. Students should be responsive to their peers' inquiries and follow through on what they agree to do for their group or for another student. As with face-to-face interactions, students who collaborate in a group may encounter challenges. Learning to work through those challenges will help prepare students for teamwork in their employment. Students should be flexible in working with others, particularly across different time zones and with those who have different schedules.

For those students who are not participating in group work and are allowed to communicate with each other about course topics without violating the Honor Code, they should consider helping one another. Doing so benefits both those who teach and those

who learn. Students should consider what is gained by teaching others. Sharing knowledge helps those who teach to also solidify their understanding, to build relationships with their mentees and to foster community (Boud, Cohen, & Sampson, 2001; Dewey, 1938; Johnson & Johnson, 2000). Hearing another student explain the concepts of a topic may be exactly what the student needs to solidify their understanding after initially listening to the professor's lecture or reading the text. If students are unclear about a topic or instructions for an assignment, they should ask whether such communication with other students violates the Honor Code; and if it does not, they should consider reaching out for help with understanding. It is possible that other students will be equally interested in making a connection.

In addition to connecting in the online classroom, when possible, students should consider attending on-campus and regional events that offer opportunities to meet face-to-face with other students, professors, and alumni. Lastly, students should keep in mind that connecting with others in the program through an online social professional network such as LinkedIn offers opportunities to maintain those connections long after graduation. In the next section, I discuss the strengths and limitations of this study and my recommendations for future research.

### **Strengths and Limitations**

This study had several strengths. It was a mixed-methods study which used the OSCS (Bolliger & Inan, 2012) to measure student connectedness in the program. It also used the four subscales of the survey as the basis for the a priori codes during the initial data analysis. The subscales and the other themes that emerged during the analysis formed the foundation for the thematic framework used in answering the research

questions. The demographic characteristics of gender and ethnicity for the ten students who participated in the interviews closely aligned with those of the student population. The ten students and four faculty members who were interviewed had average overall connectedness scores that ranged across the continuum from least-connected to most-connected. As mentioned previously, I chose to interview Anita who scored the lowest on average student connectedness from the OSCS. She represented an important group of students who were low in perceived student connectedness. By including her in my interviews, I sought to learn what might be helpful in increasing the perceived level of connectedness for those students with extremely low connectedness scores. The four faculty members taught courses that equally represented both hard and soft skills courses. I employed member checking by asking each participant to review their transcripts and make any corrections needed to accurately reflect our conversations.

In addition to strengths, the study had some limitations. I was the sole researcher who collected the data, transcribed the interviews, and coded and analyzed the data. It should be noted that I employed a colleague to review the coding process on one-third of the transcripts and to review the themes that emerged. While I attempted to bracket out my own experiences in online learning from the study, I am familiar with the program and with the university. This case study was limited to a single online program at a single university and is not generalizable to a larger population.

### **Recommendations for Future Research**

While the results of this study suggest that online student connectedness can emerge in an OMBA program through thoughtful, intentional design and facilitation of its courses, further research is recommended across multiple populations and contexts. I

recommend future research in online student connectedness with the following: (a) a longitudinal study, (b) an expanded study which includes multiple universities and/or multiple majors, (c) a study which considers the influence of the student's personality type (Myers, 1993) on perception of connectedness, (d) a study which explores student choice when offered opportunities for optional collaborative work, and (e) a mixed-methods study with a greater emphasis on the quantitative data.

**Longitudinal study.** This case study provided insight into the perceptions of student connectedness for ten students during a period of about two months from the time they were initially interviewed until the time of their follow-up interview. For one area of future research, I recommend a longitudinal study which would survey and interview students at the completion of each course of the program and also a follow-up interview one year after graduation to explore how student connectedness develops and changes over time. By surveying students using the OSCS at the end of each course and chronicling their perceptions of connectedness throughout the program, future researchers could develop a greater understanding of which types of learning activities and facilitation techniques are more likely to promote student connectedness and build community.

**Expanded study.** Another recommendation for further research is an expansion of this study to other universities and to other graduate programs. For example, in addition to OMBA programs at other universities, future researchers should consider studying other professional programs such as Master of Nursing and Master of Education. Students in online professional graduate programs are often working professionals and have similar characteristics and needs. By studying connectedness

across different disciplines, researchers might confirm the findings of this study and also discover new ways that other educators promote online student connectedness and build community.

**Personality type study.** Another consideration for study is the influence of a student's Myers Briggs personality type (Myers, 1993) on their perception of connectedness within the program. Without being prompted, two students and one faculty member who participated in the interviews said they were introverts. One said he was an "extreme introvert," and another stated she was "very introverted." A study of personality types and how connectedness may differ between introverts and extroverts in a mostly asynchronous online format may contribute to a better understanding of how personality type influences connectedness and, consequentially, satisfaction and retention in an online program.

**Optional collaborative work study.** In addition to the studies outlined above, a study of student choice when offered optional collaborative work may shed light on the reasons why students choose collaborative work and the benefits they perceive by doing so. In Professor Oscar's class, students had required group work in the first week with optional collaborative or group work in the remaining weeks of the course. I recommend a study where students participate in a "shared ordeal" (Howey & Zimpher, 1989) during the first week with optional group work during the remaining weeks of the course. The study might examine (a) the number of students who choose group work and why, (b) a comparison of perception of student connectedness between students who choose group work and those who do not, and (c) a comparison of learning outcomes between the two groups.

**Mixed-methods study with a quantitative focus.** Lastly, future researchers might consider replicating this study but capture and analyze more quantitative data. In addition to the rich qualitative data from the one-on-one interviews, a closer look at data such as students' grade point average, age, gender, ethnicity, distance from campus, the industry employed, undergraduate major, marital status, number of children, and citizenship might shed light on other factors that influence student connectedness. Questions for future research include: Is there a correlation between students' demographic data elements and online student connectedness? Do students who live closer to campus perceive a greater level of connectedness than those who live farther away? Do students who have children feel more or less connected than those who do not? Does marital status influence connectedness, and if so, how? These are just a few questions and recommendations for future research. Online graduate programs are in some ways still in their infancy. Technology continues to evolve and offers greater opportunities for students and educators to communicate and connect with each other online. I share my concluding thoughts in the next section.

## **Conclusion**

The results of this study suggest several elements in the design and facilitation of learning activities that can foster online student connectedness and help students persist in an OMBA program. Through appropriate application of social constructivist theory and adult learning theory, educators can create learning activities that promote student connectedness and thereby, increase student satisfaction and retention. The program administrators, curriculum developers, course designers and facilitators, and the students all contribute to the success or failure in building community in a program. Perhaps more

art than science, the development, design, and facilitation of a quality online learning experience which fosters student connectedness is like weaving a beautiful tapestry. Each element in the creation and execution of the online experience is as important as each thread in an intricate tapestry. Interrelated and critical to the final design, the elements weave together an experience that, over time, fosters student connectedness and builds community. As no single thread can create a tapestry, no single element of online learning can build community. Rather, the efforts of all who create, facilitate, and participate in the learning activities are critical to the success of the program and to the sense of community and connectedness that might emerge and flourish over time.



## Appendix A

### Online Survey for Faculty

#### Consent:

Welcome to the research study! I am interested in understanding online student connectedness in the Online MBA Program. As a faculty member, you will be presented with information relevant to the course you teach and will be asked to answer some questions about it. Please be assured that your individual responses will be kept completely confidential by the researcher. If you teach more than one course, please complete one survey for each course you teach. William & Mary will be named as the institution in the study.

The survey should take you about seven minutes to complete. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Karen G. Conner at [Karen.Conner@mason.wm.edu](mailto:Karen.Conner@mason.wm.edu).

By choosing “Yes” below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

Have you read the above consent, are you 18 years of age, and do you wish to complete the survey? (Yes/No)

#### **Comfort**

1. I make an effort to provide a safe online course environment where my students feel free to express themselves.

#### **Facilitation**

2. I encourage students to work together in my course.  
3. There are assignments in my course that require group work or allow students to collaborate with each another.

#### **Community**

4. I get to know the students in my course.

#### **Facilitation (continued)**

5. I integrate collaboration tools (e.g. chat rooms, wikis, group areas, discussion fora, Twitter, video conferencing, blogs, Padlet, etc.) into online course activities.  
6. I promote interaction between learners in my online course.

7. I promote collaboration between students in my online course.
8. I am responsive to my students' questions.
9. I give frequent feedback to my online students.
10. I participate in online discussions.

**Interaction and Collaboration**

11. I encourage students to relate their work to others' work in my course.
12. I encourage students to work with others in the online course.
13. I encourage students to share information with other students in the online course.

**Additional Questions**

14. Student connectedness or building community is important for positive student outcomes in my course.
15. I have attended the Online MBA weekend residencies, met the students, and interacted with them during the residency.
16. Are you willing to participate in a one-hour personal interview (and possibly one 20-minute follow-up interview) with the researcher at a time that is mutually convenient for you to further explore your perceptions of your online course?

## Appendix B

### Online Survey for Students and Alumni

#### Consent:

Welcome to the research study! I am interested in understanding online student connectedness. You will be presented with information relevant to online student connectedness and asked to answer some questions about it. Please be assured that your individual responses will be kept completely confidential by the researcher. They will not be shared with your professors or other Online MBA Program staff except in aggregate form. William & Mary will be named as the institution in the study.

The survey should take you around 10 minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Karen G. Conner at [Karen.Conner@mason.wm.edu](mailto:Karen.Conner@mason.wm.edu).

By choosing “Yes” below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason. You also acknowledge that the researcher may access your academic record including but not limited to demographic data, whether or not you have attended a residency, and the number of courses you have completed in the program.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

Have you read the above consent, are you 18 years of age, and do you wish to complete the survey? (Yes/No)

### Online Student Connectedness Survey

#### Comfort

1. If I need to, I will ask for help from my classmates.
2. I feel comfortable expressing my opinions and feelings in online courses.
3. I feel comfortable introducing myself in online courses.
4. I can effectively communicate in online courses.
5. I feel comfortable asking other students in online courses for help.
6. I have no difficulties with expressing my thoughts in my online courses.
7. I feel my instructors have created a safe online environment in which I can freely express myself.
8. I feel comfortable in the online learning environment provided by my program.

### **Community**

9. I feel emotionally attached to other students in my online courses.
10. I spend a lot of time with my online course peers.
11. My peers have gotten to know me quite well in my online courses.
12. I feel that students in my online courses depend on me.
13. I can easily make acquaintances in my online courses.
14. I have gotten to know some of the faculty members and classmates well.

### **Facilitation**

15. Instructors integrate collaboration tools (e.g., chat rooms, wikis, and group areas) into online course activities).
16. In my online courses, instructors promote interaction between learners.
17. Instructors promote collaboration between students in my online courses.
18. My online instructors are responsive to my questions.
19. I receive frequent feedback from my online instructors.
20. My instructors participate in online discussions.

### **Interaction and Collaboration**

21. I relate my work to others' work in my online courses.
22. I discuss my ideas with other students in my online courses.
23. I collaborate with other students in my online courses.
24. I work with others in my online courses.
25. I share information with other students in my online courses.

### **Additional Questions**

26. Overall, how satisfied or dissatisfied are you with the Online MBA Program?  
(Extremely dissatisfied, somewhat dissatisfied, neither dissatisfied nor satisfied, somewhat satisfied, extremely satisfied)
27. Have you considered leaving a course or the program? If so, how often have you considered it?  
(Never or almost never, sometimes, about half the time, most of the time, I have left a course or the program)  
(If left the program) What was your reason for leaving the program?
28. How important or unimportant to you is developing a professional network within the Online MBA Program?  
(Not at all, slightly, moderately, very, or extremely important)
29. To what extent did you consider attending William & Mary as an undergraduate student?
  - a. I did not consider attending William & Mary as an undergraduate

- b. I considered but did NOT attend William & Mary as an undergraduate
- c. I attended William & Mary as an undergraduate

30. Are you willing to participate in a one-hour personal online interview (and possibly one 20-minute follow-up interview) with the researcher at a time that is convenient for you to further explore your perceptions of the Online MBA Program? If you are chosen to participate and agree to be interviewed, you will receive a \$30 Amazon gift card as a token of appreciation.).

(Yes/No)

31. Please share any additional information that might be helpful regarding how you connect or do not connect with other students, professors, and staff in the Online MBA Program and how collaborative work influences your satisfaction or dissatisfaction in the program.

## Appendix C

### Initial Semi-structured Interview Questions for Students and Alumni

1. You indicated that overall, you are [Extremely dissatisfied, somewhat dissatisfied, neither dissatisfied nor satisfied, somewhat satisfied, extremely satisfied] with the Online MBA Program. Thinking back to the first course, Renaissance Manager, and the courses that you have had since, what contributed most to your level of satisfaction/dissatisfaction?  
(If the respondent was neither dissatisfied nor satisfied, ask: What could have changed that would have pushed you to become more satisfied with the program?)
2. Your survey responses indicate that you perceived a (low, moderate, high) level of comfort in the Online MBA Program. Can you tell me what contributed to your level of comfort or discomfort? Please give examples of what made you feel comfortable or uncomfortable.  
(If the respondent was moderate, ask: What could have changed that would have pushed you to become more comfortable within the program?)
3. Your survey responses indicate that you perceived a (low, moderate, high) level of community in the program. Can you tell me what contributed to your perception of community? Please give examples of when you felt community did or did not exist.  
(If the respondent was moderate, ask: What could have changed that would have contributed to a higher perception of community for you within the program?)
4. Your survey responses indicate that you perceived a (low, moderate, high) level of facilitation of learning within the Online MBA Program. Can you tell me in what ways the courses were designed or ways that the instructors facilitated the courses that fostered or impeded your engagement as a student? To what extent were you offered opportunities to communicate, interact, and collaborate with course participants (including the instructor)?  
(If the respondent was moderate, ask: What could have changed that would have improved your perception of facilitation of learning? In other words, how might instructors have designed or facilitated their courses that would have improved your engagement and/or feeling of connectedness as a student?)
5. Your survey responses indicate that you perceived that you had a (low, moderate, high) level of interaction and collaboration with other students in the course. Tell me about how you interacted with others in the course. How did those interactions influence your learning and/or your course satisfaction?
6. Have you explained course material to another student, or have you asked another student to help you understand course material? If so, please explain.
7. Please tell me about your best or most effective group experience. ... How did that experience make you feel?
8. Please tell me about your worst or least effective group experience. ...How did that experience make you feel?
9. What types of interactions did those experiences require? Do you continue to interact with those group members? If so, how and to what extent?

10. You indicated that you have [Never or almost never, sometimes, about half the time, most of the time] thought of leaving a course or the program. What has contributed most to your thinking or not thinking of leaving a course or the program? If you thought about leaving, what made you decide to persist?  
OR  
You indicated that you have left a course or the program. Please tell me what prompted that. To what extent are you satisfied or dissatisfied with your decision? What could have been different that may have caused you to reconsider persisting in the course or program?
11. You indicated that developing a professional network within the Online MBA Program is [Not at all, slightly, moderately, very, or extremely important] to you. To what extent has the program met or not met your expectations for networking?
12. What has been your greatest challenge or obstacle in the program?
13. You indicated that you:
- a. did not consider attending William & Mary as an undergraduate
    - i. Why did you choose to apply to William & Mary's graduate school when William & Mary was not a consideration for your undergraduate education?
  - b. considered but did NOT attend William & Mary as an undergraduate
    - i. Why did you choose not to attend William & Mary as an undergraduate? Why did you decide to apply to William & Mary's graduate school?
  - c. attended William & Mary as an undergraduate
    - i. How and to what extent, if any, did your undergraduate experience influence your decision to apply to William & Mary's graduate school?
14. Please share any opportunities you have had to converse with or connect with a faculty member.
15. Please share any additional information that might be helpful regarding how you connect or do not connect with other students, professors, and staff in the Online MBA Program.
16. Please share any additional thoughts on collaborative work and how it might influence your learning.

## Appendix D

### Initial Semi-structured Interview Questions for Faculty

1. What course or courses do you teach?
2. You indicated that you make an effort to provide a safe online course environment for your students to feel free to express themselves. How do you do that?

OR

You indicated that you do not make much of an effort to provide a safe online course environment for your students to feel free to express themselves. Why do you choose not to make that effort?

3. You indicated that you encourage students to work together in your course. How and why do you do that?

OR

You indicated that you do not necessarily encourage students to work together in your course. Why is that?

4. You indicated that you make assignments in your course that require group work or allow students to collaborate with each other. Please give examples of those assignments and/or how students collaborate with each other.
  - a. Why do you prefer to make these assignments group assignments rather than individual? What are the benefits?
  - b. Please list group assignments in your course that you believe to be ambiguous and/or complex, requiring students to negotiate and collaborate rather than “divide and conquer.” These assignments may require frequent and/or high levels of interactions among students.
  - c. Please list group assignments in your course that you believe to be less complex and more straightforward where students might be able to “divide and conquer,” working more individually than collaboratively.
  - d. How do group assignments and/or collaboration influence individual student outcomes?

OR

You indicated that you do not make assignments in your course that require group work or often allow students to collaborate with each other. Why do you prefer that your students work individually? What are the benefits?



5. You indicated that you get to know students in your course. Can you explain how that happens and why?

OR

You indicated that you do not get to know students in your course. Why is that?

6. You indicated that you integrate collaborative tools into your course. What tools have you integrated and how have they influenced your students' learning?

a. Do you find that some collaborative tools are more effective than others? If so, please explain.

OR

You indicated that you do not integrate collaborative tools into your course. Why not?

7. You indicated that you promote interaction and/or collaboration between students in your course. How and why do you do that?

OR

You indicated that you do not promote interaction and/or collaboration between students in your course. Why is that?

8. You indicated that you are responsive to your students' questions. How quickly do you respond and what method/s do you use to respond?

OR

You indicated that you are not very responsive to your students' questions. Why not?

9. You indicated that you give frequent feedback to your students. How frequently do you give feedback? What type of feedback do you give and why?

OR

You indicated that you do not give very frequent feedback to your students. How frequently do you give feedback? What type of feedback do you give and why?

10. You indicated that you participate in online discussions. Please explain more about that.

OR

You indicated that you do not participate in online discussions. Why not?

11. You indicated that you encourage students to relate their work to others' work in the course. How and why do you do that?

OR

You indicated that you do not encourage students to relate their work to others' work in the course. Why not?

12. You indicated that you encourage students to work with others in the course. How and why do you do that?

OR

You indicated that you do not encourage students to work with others in the course. Why not?

13. You indicated that you encourage students to share information with other students. What types of information do you encourage them to share and why?

OR

You indicated that you do not encourage students to share information with other students. Why not?

14. You indicated that student connectedness or building community is important for positive student outcomes in your course. Why?

OR

You indicated that student connectedness or building community is not very important for positive student outcomes in your course. Why do you think not?

## Appendix E

### Codes\*

- **Comfort**
- **Community**
- **Facilitation**
  - *Course design*
  - *Course facilitation*
- **Interaction and collaboration**
  - **Pooled**
  - **Serial**
  - **Reciprocal**
  - **Low-quality**
  - **Medium-quality**
  - **High-quality**
  - *Group work*
  - *Discussion board*
  - *Interaction with faculty*
  - *Interaction with executive partners*
- *Learning management system*
- *Residency*
- *Responsiveness*
- **Retention**
- *Unresponsiveness*

\*Codes in bold were a priori codes. Codes in italics were added at the suggestion of the reviewer.

## Appendix F

### Follow-up Semi-structured Interview Questions for Students and Alumni

1. The topics of today's conversation will be centered around interactions and connections with students and/or faculty in the OMBA program. I will use "interactions" and "connections" interchangeably. Just so we are on the same page, the existence of some interaction means that individuals have affected one another in some way, and the interaction has an emotional dimension. The connections can occur as a result of a momentary encounter, or they can also develop and change over a longer period of time. So, in conclusion, they have
  - some sort of time dimension (they can be short- or long-term)
  - an emotional dimension.

Do you have any questions about the definitions of interactions or connections as I have just mentioned?

If you want me to come back to these definitions, please let me know.

2. I would like for you to respond using one word with regard to the following: I'm interested in your initial feeling about the interactions or connections that you have made with students and/or faculty in the OMBA program. Please take a few minutes to think about and respond using just one word.
3. Does your word "[their word]" have more of a positive or negative connotation for you?
4. I'm interested in the quality of interactions or connections that you have had with students and/or faculty in the OMBA program.

I will define what I mean by high-quality and low-quality connections:

**High Quality:** They are life-giving. The connections are flexible, strong, and resilient. High-quality connections have three characteristics. They result in a feeling of

- positive regard (where people observe the best in us),
- mutuality (feeling that the person is responding to and open to us),
- vitality (feeling energized by the connection).

The connections may not be lengthy. They may not endure. High-quality connections can often elicit both positive and negative emotions, and they have the capacity to withstand more emotion of varying kinds. More importantly, high-quality connections foster growth and development, are able to withstand setbacks and are a safe place for expressing new and creative ideas (Dutton & Heaphy, 2016).

**Low Quality:** They are life-depleting. There is a little death in every low-quality interaction. They leave damage in their wake. “Corrosive connections are like black holes: they absorb all of the light in the system and give back nothing in return.” (Dutton, 2003, pp. 7-8). A low-quality, toxic connection depletes and degrades. Low-quality connections produce feelings of

- inadequacy
- defensiveness
- lack of safety.

My next two questions are going to be about your experiences that you might describe as high-quality and low-quality. Which one would you like to start with? Tell me about that.

OK, you told me about a low/high-quality experience, tell me about one that you would consider high/low-quality.

5. What happened in these experiences that made you feel either connected or disconnected with students and/or faculty?
6. Is there anything that you have experienced in the program since we last talked that you would like to share?

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### Professional Experience

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