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The Relationship Between Online Students' Use of Services and Their Feelings of Mattering

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STUDENT SERVICES AND MATTERING

THE RELATIONSHIP BETWEEN ONLINE STUDENTS' USE OF SERVICES AND THEIR FEELINGS OF MATTERING

by

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B.S., Computer Information Systems, Tulane University, 1988
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DISSERTATION

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Dedication

I dedicate this work to staff and faculty in higher education working with students every day.

Acknowledgements

The work of a dissertation is a solitary activity. Yet, it also requires the support of so many people all along the way. I have such deep gratitude for the cadre of people who supported me throughout my journey.

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ABSTRACT

The purpose of this single case study was to examine the relationship between online students' use of support services and their feelings of mattering using a convergent parallel research design to collect quantitative and qualitative data. Students enrolled exclusively in online classes during the academic year 2015-2016 at the University of New Mexico (UNM) were invited to participate. The survey was based on the theoretical and conceptual frameworks for comprehensive services and mattering theory. Responses provided descriptive statistics and correlation analysis with stories that added to the description of students' service experiences.

Service-to-service correlations showed correlation strength of moderate, strong, or very strong.

Services-to-mattering correlations showed nine services moderately or strongly positively correlated with students' feelings of mattering: Academic Advising, Academic Counseling, Institution-to-Student communications, Placement Services, Ethical & Legal Services, Orientation, Personal Counseling, Career Services, and Retention Services. These

nine services tend to function as relationship-style interactions. Qualitative responses indicate that students view their interactions without distinguishing them as service- or instruction-based interactions.

Four themes that emerged from this study offer insight into how UNM can relate to its online students through its service offerings and interactions. Students view their online experiences *holistically*, suggesting an integrated approach to service- and instruction-based interactions. By interacting in caring, helpful ways, and providing a *personal touch* through service interactions, UNM can provide an avenue for students to build *community and connect* with the institution and each other, *supported and accessed through technology*.

Keywords: mattering, services, online support, convergent parallel, case study, college students, online students, correlation analysis

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Due to experiences both in my career and as an undergraduate student, I wanted to examine the relationship between online students' use of support services in higher education and their feelings of mattering to the institution. Feelings of mattering contribute to student engagement, or commitment, to academic studies. This commitment, in turn, influences students' decisions of whether or not to persist in college to completion of a degree.

My own sense of mattering played a significant role in earning my undergraduate degree at Tulane University. As a first-generation college student, my parents had no expectations, or even hopes, that any of their four daughters would be a college graduate. My path to graduation was circuitous. I attended five different types of institutions over nine years: a local community college, a major research university, a small local university, a for-profit college, and a private university. I did not see myself as a college graduate during any of those experiences, though I had collected a lot of credit hours and spent a lot of time perusing the course catalogs "deciding" on a major.

I didn't see an advisor at any of the other institutions, but at Tulane University a visit for academic advisement was mandatory. My advisor greeted me at the door, knew my name, asked me to her office, asked me questions, and started filling in a form using my transfer transcripts. She was chirpy and pleasant, but I had no idea why I had to be there or what she could possibly do for me that I couldn't do for myself. Near the end of the session, she handed me the form with her markings and told me that I could graduate in two years if I follow this plan. Graduate…? That pivotal moment was the first time I saw myself actually completing my studies and graduating. I felt like she cared about me and my success. And, I followed the plan and graduated!

As my own experience illustrates, contacts with faculty and staff offer opportunities to support students and to create positive interactions (Crawley, 2012; Raisman 2009, 2013). These positive experiences can lead to students' increased feelings of mattering to the institution (Schlossberg, 1989). My study is about services for online students and how those interactions influence students' feelings of mattering to the institution.

Through my nineteen years of working at the University of New Mexico (UNM), I have personally experienced the beneficial aspects of student services that provide students with a sense of mattering. My career has been rich with experiences from various roles in different departments, with some of the most rewarding including direct contact with students, facilitating their navigation through various enrollment and academic processes, and creating systems designed to facilitate the flow of information to students. One of my significant contributions was to pioneer the student "one stop shop" for enrollment services. Additionally, my experience includes the teaching of online classes for seven semesters as adjunct faculty. I want to promote and ensure the success of students as they pursue their academic goals.

My study examined services that online students use to varying degrees and for various purposes throughout their university life. My study was not directly focused on student retention, student success, or the instructional experience for students at the institution. I was looking at one facet of the student experience, one that institutions can control, and one that every student must encounter at some point during college, usually at multiple points. I examined the experiences of students in online courses at UNM because retention in online classes is lower than face-to-face classes. This study hypothesized that students who find services to be useful and who have positive feelings about those service

interactions will have a greater sense of mattering to the institution. For purposes of this study, I used Nancy Schlossberg's (1989) definition of mattering as the belief or perception, correct or not, of being important to someone or something. Mattering is the student's belief that they matter to the institution. Further, I used the terms distance education and online learning interchangeably.

Defining the Problem

It is important to examine the relationship between online students' use services and their feelings of mattering because students are more likely to engage and to persist when they feel they are important or "matter" to someone (Schlossberg, 1989). The support systems and professionals within universities have the potential to facilitate a sense of mattering when the services are responsive to students' needs (Schlossberg, 1989). The Instructional Technology Council reports that "providing adequate support services for distance education students emerged as the number one challenge" for distance education (Lokken & Mullins, 2013, p. 10). My study investigates online students' use of support service and their feelings of mattering at UNM.

To examine online student's use of services and their feelings of mattering to the institution, it is important to first understand some of the issues present in online education. The Instructional Technology Council reported that 6.7 million students enrolled in online classes in 2013 (Lokken & Mullins, 2013). However, 40-80% of online students drop out of online classes (Bawa, 2016). Students in online courses are 10% to 20% more likely to drop out or fail than students in traditional face-to-face classes (Bawa, 2016; Herbert, 2006).

Whether a university succeeds or fails in assisting a college student in achieving their academic goals can be measured and defined in a number of ways. In the short term, a

student may withdraw from a particular class or receive a failing grade. A student may withdraw from courses altogether or for a period of time, or they may might leave a particular educational institution and never return. In the longer term, that student may seek to complete their education at another institution, or may never pursue classes or obtain a degree from any institution.

Terms used in conjunction with the measurement of the success of a university may include the following or variations thereof: engagement, persistence, retention; attrition, dropout; failure, success, departure, and graduation rate. Defining and measuring student success is complex and context dependent (Hagedorn, 2005). The same term may have a different meaning depending upon the study, researcher, institution, or context.

My study focused on mattering because students are more likely to engage and to persist when they feel they are important or "matter" to someone (Schlossberg, 1989). "Engagement" is the degree to which students maintain involvement, interest, attention, or motivation in school. Engagement is connected to retention because of the belief that learning improves when students are engaged (Astin, 1999). My study did not focus on retention, but understanding issues of retention, attrition, and dropout are important aspects of my study. "Retention" is defined as staying in school through degree completion and "dropout" as leaving school before the degree is completed, "two sides of the same coin" (Hagedorn, 2005; Astin, 1971). Theses definitions are simplistic and incomplete because, for example, a student may have exited one institution but transferred to another institution and still be pursuing a degree.

Online enrollment. Online courses offered through the internet are the most recent development in a history of distance higher education that began with correspondence

courses in the 1800's (Moore & Kearsley, 2012). Nationally, in the last ten years, higher education has experienced a marked increase in online enrollments (Miller, Benke, Chaloux, Ragan, Schroeder, Smutz, & Swan, 2014). Thirty percent of all higher education students enrolled in at least one online class (Allen & Seaman, 2010). A 2013 Instructional Technology Council report (Lokken & Mullins, 2013) shows 6.7 million students enrolled in online classes while a 2014 report lists 7.1 million (Allen & Seaman). However, the majority of these students are not retained; 40-80% of online students drop out of online classes (Bawa, 2016).

General reasons for attrition. Naturally, the causes of student academic failure are varied, and may arise from the personal characteristics of the student, from the educational institution or from circumstances that may be beyond any control. Many factors contribute to students' decisions to stay or leave school. Busy, "non-traditional" students with competing family demands are "most likely to leave [the] university because of 'facts of life' reasons, the most significant and influential of which is finance" (Bolam & Dodgson, 2003, p. 181). Another reason online adult students drop out is lack of time (Wlodkowski, 2003). Raisman (2008) contends that "the key to retention is providing good customer service to the customer, or in the case of schools, its clients" (p. 17) which means "treating students and one another as if they have enduring value and importance" (p. 20).

Three categories of variables for have been identified for student dropout (Berge & Huang, 2004):

- Personal variables – demographics encompassing age, gender, marital status and academic skills and abilities.
- Institutional variables – academic, bureaucratic and institutional social variables

- Circumstantial variables – socio-economic variables, academic interactions, social interactions and life situations.

Institutions have no control over student's personal variables or circumstantial variables. My study centered on an institutional variable by examining online students' use of services. The services provided by UNM and the implementation of them are under the control and governance of the university.

Attrition and online students. Coupled with increased enrollment in online courses is the increase in course dropout and failure rates. The larger volume of students along with a wider variety of types of students, with myriad differences in learning and studying, contributes to the probability of withdrawal or non-completion (Morgan, 2012). Attrition rates are higher for online students than those of on-campus students (Britto & Rush, 2013; Carr, 2000; Kember, 1995; Simpson, 2004; Pierrakeas, Xenos, Panagiotakopoulos & Vergidis, 2004). Recent research tracking online students in the United States conveys that "a total of 41 percent of chief academic officers reported that they agreed that retaining students was a greater problem for online courses than for face-to-face courses" (Allen & Seaman, 2014, p. 18).

Purpose

The purpose of this study was to examine the relationship between online students' use of support services in higher education and students' feelings of mattering to the institution. Feelings of mattering contribute to student engagement, or commitment, to academic studies which, in turn, influences students' decisions to persist to completion of a college degree, or not. Data underlying this study came from the experiences of students in online courses at UNM. This study hypothesized that students who find services to be useful

and who have positive feelings about those service interactions had a greater sense of mattering to UNM.

Mattering and Student Engagement

Schlossberg (1989) related Rosenberg and McCullough's (1981) theory of mattering in the context of higher education, a key component to my study. She states that "when institutions of higher education devote desk space to the concerns of adult learners and provide relevant secretarial and message services and activities, adult learners can feel they matter" (p. 5). Schlossberg's comment uses outdated language, due to the time frame it was made, but the meaning behind her comment is valid today. Student support systems and professionals have potential to facilitate student integration and a sense of mattering when they are responsive to students' needs (Schlossberg, 1989). Students are more likely to engage and to persist when they are integrated into the institutional culture (Tinto, 1987), and when they feel they are important, or "matter" to someone (Schlossberg, 1989).

Accepting that the literature states that students who feel that they "matter" to their institution are more likely to engage and to achieve student success, my study evaluated the relationship between the use of support services for online students' and their feelings of mattering to the institution. Relevant, comprehensive, and accessible support for distance education students may impact students' decisions to leave or graduate because the interactions may leave the student with a feeling of marginality or mattering. Marginality, or the feeling of being an outsider, and mattering, can be viewed as two opposite ends of a spectrum. As feelings of mattering increase, feelings of marginality decrease and vice versa. Looking only at one higher education institution, UNM, and students enrolled exclusively in

online classes, my study examined the relationship of online students' use of services with their students' feelings of mattering to the institution.

The ability to achieve is complex and is influenced by many factors, some of which are external factors and some are within control of the individual, and driven by needs of achievement, power, and affiliation (MacClelland, 1961). The desire to strive for achievement is influenced by beliefs about one's efforts, cognitive and emotional variables, and environmental factors (Bandura, 1997; Graham & Weiner, 1996; Stipek, 1996; Weiner, 1990). The concept has to do with the individual's reasons they attribute to success and failure, beliefs in competency to perform certain tasks, learned helplessness, thoughts regarding goals, self-worth, and intrinsic motivation (Bandura, 1997). Ryan and Deci (2000) describe intrinsic motivation as engaging in activities for their own sake, combining interest and learning with a sense of competence and satisfaction. Extrinsic motivation is a result of engaging in an activity for external reasons such as prizes or praise (Ryan & Deci, 2000). Beliefs about one's effort and ability to succeed in a future task, referred to as self-efficacy, strongly impacts one's ability to do so whether one possesses the skills to carry out the task or not (Bandura, 1997). These beliefs also determine the activities the individual chooses to engage in and the effort and the amount of time the individual is willing to expend (Bandura, 1986).

Carl W. Buehner wrote: "They may forget what you said — but they will never forget how you made them feel" (as cited in Evans, 1971, p. 244). This famous line has been used so much that it is often attributed to other people, such as Maya Angelou, and others. It is a sentiment that reflects a common desire to give and receive feelings of mattering to someone or something. Mattering is "the perception that, to some degree and in any of a variety of

ways, we are a significant part of the world around us" (Elliot, Kao, & Grant, 2004, p. 339). Mattering is also described as "a motive: the feeling that others depend on us, are interested in us, are concerned with our fate, or experience us as an ego-extension exercises a powerful influence on our actions" (Rosenberg & McCullough, 1981, p. 165). Within the context of higher education, Nancy Schlossberg (1989) states that university practices, programs, and policies potentially contribute to students' feelings of mattering.

What does it mean to provide support mechanisms for distance education students and why is it important? Online student services as "all administrative, academic, and personal services that online learners need from their first institutional contact to the last interaction they have with the institution" (Crawley, 2012, p. 10). Institutions are experiencing increased enrollments in online courses with growing concerns about retaining students to completion of the course or program. Support services are a mechanism to not only provide necessary information students need to navigate institutional systems and processes but they are also key points of interactions between the student and institution, providing opportunities to impart a sense of mattering to the student.

Student Support and Retention

Student retention is a complex issue with many factors contributing to students' decisions to stay in school or leave. Many of the factors leading to academic failure or success are beyond the control of an institution of higher education. The quantity and quality of an institution's student support services, however, is a factor over which the institution can exercise some control.

Services. Each contact that students have with faculty or staff is an opportunity for the institution to be helpful and supportive, and to create a positive interaction (Crawley,

2012; Raisman, 2009, 2013). Some of these interactions are formalized into what are collectively known as "support services." Institutions are recognizing that distance education students have different needs than traditional on-campus students and are beginning to broaden their scope of services to support these students toward academic success (Crawley, 2012). Because of this broad scope, providing adequate support services for distance education students emerged as the number one challenge for administrators (Allen & Seaman, 2014).

Administrative support services have a role in either enhancing or curtailing "collective affiliation", which is the quality and quantity of contact between the student and the institution (Kember, 1989). Kember (1989) developed a longitudinal process model based on drop-outs from distance education. The components of his model are: student characteristics; the students' commitment to completing goals; the academic environment and the student's integration with it; aspects of social and work lives and integration with academic life; and, cost/benefit analysis. Certainly, each of these components represent many complex factors leading to students' decisions to persist. Collective affiliation is associated with this academic aspect through instructional interaction and through "the interactions associated with academic support for the courses" (p. 293). This model was important to my study because it relates the use of services to students' feelings toward the institution, which plays a role in students' decisions to persist or drop out. Variables such as "the frequency and nature of contacts, the speed of response to the student-initiated contacts, the provision of local tutorials or the use of telephone or satellite conferencing can all contribute to whether or not the student has any positive feelings of association with the institution" (Kember, 1989, p. 293-294).

Retention. The reasons for student dropout are complex and numerous (Nichols, 2010; Simpson, 2004). Even though many factors of persistence are beyond their control, institutions have the ability to influence students' decisions (Rovai, 2003). Interventions through services for online students can increase student retention (Simpson 2004). Institutions can impact retention through a focus on online students' needs and providing adequate support services for them (Heyman, 2010). "Student support services based on sound interventions undeniably make a positive and measurable contribution to student retention" (Nichols, 2010, p. 105). The role that student services has in the retention puzzle was important to my study because I focused on the use of support services for distance learners and how those services impact students' feelings of mattering to the institution.

A plethora of support services exist in nearly any institution of higher education today, targeting students from various ethnic groups, students with disabilities, even students from families of migrant workers. Each institution is structured a little differently, but many of the services directed at supporting students are often grouped in divisions known today as "student affairs." Nuss (2003) explains that a concept of the student affairs profession is a focus on the "development of the whole person" (p. 65). The National Association of Student Personnel Administrators website (www.naspa.org) states that opportunities for teaching and development exist everywhere and at all times and the job of student affairs professionals is to foster and promote these interactions.

The foci of student affairs and the development of student services is evolving. Trends in student services and the various types of models used in institutions across the United States include student-centered services such as "one-stop" service centers, process redesign, document management, and the use of technology through web portals to provide

personalized, customized, community oriented, and process oriented services (Burnett & Oblinger, 2002). The ways in which institutions must now consider engaging students has expanded. Distance education expands these issues beyond what happens in the brick and mortar campus. Institutions of all types face these complex challenges and more, and are continuously adapting to meet changing needs. Providing for instruction alone is not enough to ensure successful outcomes.

Student retention in higher education is an ongoing issue and concern for most institutions. Many factors contribute to this situation. Many states are still making budgetary adjustments due to recent and profound economic downturns and the accompanying ripple effect through state-funded programs and institutions. Federal and state funding for higher education has dwindled resulting in reduced grant money for research, cuts to academic programs, little or no pay increases for faculty and staff, and attrition of faculty and staff as positions go unfilled. Through these adjustments, the workload and costs of delivering services and programs within these organizations did not decrease. The burden of cost has shifted to students who find themselves shouldering more of the institutional costs coupled with even more student loan debt. Additionally, students have many more educational choices than ever before due to the proliferation of technology and the access to education that it provides.

Challenges. Besides providing adequate support services, other challenges that institutional leaders face as they continue the transformation of higher education through online learning fall into three major themes: leading change, ensuring operational excellence, and sustaining innovation (Miller, et al., 2014). Regarding leadership, the authors point out that as institutions face ongoing budget constraints, increasing costs of tuition, increasing

student loan debts, and the constant pressure to do more with less, leaders must help to shift attitudes about distance education.

Challenges extend to leaders developing effective support practices for distance education students. An issue Crawley (2012) points out regarding distance education students is that "at some institutions is it unclear which department(s) are ultimately responsible for developing and implementing the services to support their success" (p. 11). Support for online students has developed as a result of reacting to growth and just-in-time needs rather than as a result of careful planning. Staff may be positioned to be the first point of contact to easy entry into various institutional and learning systems and may have technical expertise to clear obstacles, but these same staff rarely have the breadth of expertise to provide a full scope of services. "Online learners might be recognized as a unique population of students with specific needs to facilitate their success" (p. 11).

The University of New Mexico

In the academic year 2015-2016, across all campuses, UNM enrolled 27,353 students, with 79% of freshmen making it past the first year (College Factual, 2016). Only 14.6% of students graduate "on time", within four years, depending on the degree and program, but nearly half, 47.8%, of students enrolled at UNM do eventually graduate (College Factual, 2016). Students frequently opt for a combination of face-to-face; online classes; and "hybrid" classes that use elements of both types of formats. Published information on enrollments at UNM do not differentiate between the types of formats for instruction that students choose. However, UNM's Extended Learning department, which offers academic technology and instructional support for online course delivery, reports that roughly 1700 students per

semester from its main and health science campuses enroll exclusively in online classes. These are the students that were invited to participate in my study.

Research Questions

The focus of this study was to examine the relationship of student support services with students' sense of mattering for online students attending UNM. The study employed a convergent parallel survey approach to examine the relationship between the use of services for online students and their feelings of mattering.

The main research question for my study was: What is the relationship of student support services with students' sense of mattering for online students attending UNM?

The sub-questions of this research were:

- What support services do distance education students utilize and why?
- What is the relationship between students' feelings of mattering and their use of support services?
- How did the students' interactions with services impact their sense of mattering to the institution?

The results from this study were used to identify how services are accessed and used in order to inform decision makers responsible for providing student service programming for distance education students.

Conceptual and Theoretical Frameworks

I used two frameworks to support the design of my study. WCET's "spider web" of services (Shea & Armitage, 2002) is a framework outlining the comprehensive set of services that online students may need. Schlossberg's (1989) theory of mattering is based on the idea that when online students feel they are important, or matter, they engage more with the

institution. Combined, these two theoretical frameworks form the basis for a conceptual model, illustrated in Figure 1, to aid understanding for this study. The issue of student retention is quite large and encompasses many factors that influence students' decisions to persist. Student engagement is one of the factors of persistence. Mattering is a student development theory that is connected to student engagement. The concept is that as online students utilize campus services and encounter positive interactions, students have a stronger sense of mattering to the institution. In turn, their feelings of mattering influence their level of engagement with the institution and positively impacts their decisions to persist. My study was designed to examine the relationship between students' use of services and their feelings of mattering only.

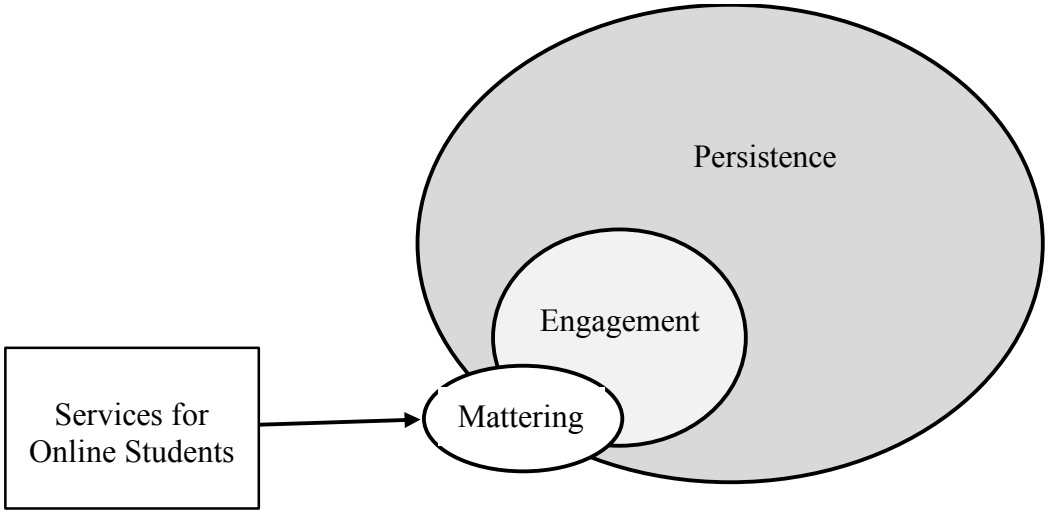

Figure 1. Conceptual framework for services and mattering in relation to retention.

Significance of the Study

My study is important because it addresses the institution's services and the role of services in contributing to a sense that students matter to the institution. Enhanced

understanding of the role of student support services can facilitate decision-making about service offerings and access to them. Administrators can develop or enhance existing support structures to ensure that services are relevant, comprehensive, and accessible. This study provides guidance for institutions regarding their service programming and their potential to influence the complex issue of retention rates of online students.

Assumptions

Fundamental assumptions of this study are that UNM support services are accessed and used by some students. I also assume that collecting both qualitative and quantitative data provides multiple perspectives on the relationship between student services and mattering.

Students are busy people, yet I assume they will be willing to participate in the survey and that they will respond truthfully. Asking students to tell their stories assumes that they will present their experience in a truthful way even though their perception of reality may be different from someone else's.

Schlossberg's (1989) theory of mattering and marginality assumes that students feel marginal or that they matter. Since my study is based on hers, my study also makes the same assumption.

In a convergent parallel research design an assumption is that the data will provide different types of information. Another assumption is that the same concepts will be mirrored in both the quantitative and qualitative data collection method.

Delimitations and Limitations

Delimitations. My study occurred with one institution of higher education, one four-year university, the University of New Mexico. Faculty, staff, and administrator roles within

the university are vital to the function of providing support services; however, the perspectives of these groups were not the focus of this study. Data came from the student perspective only, from students enrolled at UNM exclusively in online courses, not taking other types of classes, hybrid classes (curricula including face-to-face and online courses), or Massive Open Online Courses (MOOC's). Also, technology tools used for instruction or in providing support services were not evaluated in this study. Email invitations to participate in this study were sent to students enrolled for the academic year beginning Fall 2015 to Summer 2016 and exclusively in online courses. Students under age 18 were excluded from the study.

Limitations. Students who dropped classes or withdrew from the university may not have received the invitation. Students who dropped classes, or those who otherwise did not have an active email address in the UNM student system, were not likely to participate in the study and their experiences may not have been captured. The email invitation list was generated from the UNM student database. Students with inactive email accounts did not receive the invitation.

Summary

The focus of this study was to examine the impact of support services for online students on the degree to which students feel they matter and their general feelings of mattering at UNM for those who had used UNM services. Services for online students, if also delivered via distance methods, require the effective use of technology tools. Enrollment in distance education courses has increased while retention of online students is low and due to many factors beyond control of the institution. Support services are one factor that institutions can control and effective services contribute to positive feelings about the

institution. Students' feelings of mattering contribute to students' integration with the institution and enhances student engagement. Thus, my study connects students' use of services and their feelings of mattering to UNM.

Definition of Terms

For the purposes of this study, the following terms were defined as indicated.

Attrition – The reduction in numbers of student attending courses and the institution over time.

Distance Education, Distance Learning, Online Learning, Virtual Learning - Institution-based, formal education where the learning group is distributed, and where interactive telecommunications systems are used to connect learners, resources, and instructors.

Drop Out – leaving school for any reason before graduating or completing a program of studies. This could also include students who stop out, leaving school with intentions of returning to complete their program of study. Students may also be counted as a drop out at one institution but may have transferred to another institution and be a persist there.

Graduate, Graduation – Completing a course of study, applied to students.

Mattering - The belief or perception of being important to someone or something.

Persistence - A student measure of college continuation behavior that leads to graduation. Students may also be counted as a drop out at one institution but may have transferred to another institution and be a persist there. For purposes of this study, persistence is retention at the same institution.

Retention – An institutional measure of students re-enrolling at the institution they attended the previous year.

Stop Out - Leaving school with intentions of returning to complete their program of study.

Student Services – Non-instructional interactions between the student and a representative of the institution to provide assistance and increase understanding of process, procedures, completion of tasks and forms, skill development, career opportunities, meeting programmatic requirements, and addressing personal issues.

Student Success – Achievement of students educational goals; measured in graduation and retention rates at institutions.

Transfer – Students who leave one institution and attend another.

Chapter 2: Literature Review

Introduction

This chapter outlines the research related to student development theories, distance education students' needs for support services and how meeting those needs produces feelings of mattering, which affects student engagement and influences students' decisions to stay in school. A convergent parallel survey study with quantitative and qualitative responses was used to examine the impact of student services for college-level distance education students on their feelings of mattering. Thus, the guiding question of this research study was: "What is the relationship of student support services with students' sense of mattering for online students attending UNM?" In conducting this study, I hypothesized that a positive correlation exists between online students' experiences with the use of support services and their feeling of mattering to UNM.

An understanding of relevant conceptual and theoretical frameworks provided a structure (Green, 2014) for this study because "theory provides a means (order and explanation) to make sense of complex practices and phenomena" (Garrison, 2000, pg. 6). This review provides an overview of the relevant literature forming the background concepts, theories, and frameworks in which the study question arises. In particular, this review includes presentations of: (1) the theoretical foundations that gave impetus to and which formed the basis for development and implementation of distance education course studies by institutions of higher education; (2) the theories of student development that have been understood to motivate students in their successful pursuit of higher education, including the role of mattering; and (3) the conceptual frameworks for student-educational institution

interaction that determine the provision, scope, and delivery of student services to distance education students.

Student Development Theory

This section is intended to provide a broad understanding of the breadth and scope of student development theoretical frameworks and concepts that I used for the foundation of my proposed research. Long (2012) and Kuh, Kinzie, Buckley, Bridges, and Hayek (2006), independently present structures to organize the literature that I will use to summarize the theoretical foundations of various student development theories.

Student development theories form the foundations of student affairs and student services practices in higher education (Gillett-Karam, 2016). These practices are the very core of support services which developed as a means to promote student success (Gillett-Karam, 2016) and to build meaningful programs and experiences for students (Long, 2012). Theories abound on what factors contribute to students' decisions to stay in college or pursue other activities. To stay or to go, and why, is a complex, multi-faceted decision with many factors from both the individual student and the institutional perspectives. Each framework in the collection of student development theories takes a different view and is not, and cannot be, comprehensive enough to encompass all the factors involved (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). The range of student development theories and the concepts they present are important to understand as these are the underpinnings of student affairs and student services program development. The breadth of contributions to the body of theoretical frameworks mirrors the breadth of service offerings in most institutions. Considering that the breadth of services is like a safety net used to keep students positioned

toward their academics, and to catch those students that might otherwise drift away, the theoretical foundations form the design elements of the safely net.

Long's families of student development. Long (2012) grouped student development theories into four broad categories, or families: psychosocial; cognitive-structural; humanistic-existential; and person-environment interactive. Within the families, as illustrated in Table 1, Long identified these families, their theme, and major contributors to the theoretical body of knowledge. While Long's list is thorough, it is not exhaustive of all the major contributing theorists. I used Long's framework because it provides a structure to understand the theoretical concepts associated with retention issues.

Table 1:

Long's Families of Student Development Theories and Models

Family	Brief Description of Family	Contributing Theory	Theorist	Brief Theory Description
Psychosocial	How people develop over time, focus on self-reflection and interpersonal aspects of students' lives	Identity Development	Chickering	How students' view themselves and progress in identity development
		Racial & Ethnic Identity	Phinney	Application of identity development for all minority racial and ethnic groups
		Career Development	Super	Career development and life-long vocational exploration and maturity

Family	Brief Description of Family	Contributing Theory	Theorist	Brief Theory Description
Cognitive - Structural	How students interpret and assign meaning from their experiences	Cognitive Development	Perry	Four major cognitive development periods in which students perceive and organize knowledge and allow it to challenge their existing beliefs
		Moral Development	Kohlberg	How moral reasoning impacts students' behavior and actions
		Faith Development	Park	The process of discovering and creating connections between experiences and events, providing meaning, and affirming spiritual beliefs
Humanistic-Existential	Emphasizes the conditions for healthy growth and development and focus on the student's	Wellness	Hettler	Physical, mental, and social wellness

Family	Brief Description of Family	Contributing Theory	Theorist	Brief Theory Description
	relationship to others. Balance, harmony, and purpose are highlighted.			
Person-Environment Interactive	Development of the student by focusing on the impact that the higher education environment has on the student as well as how the individual characteristic of the student might impede or enhance their own development	Student Involvement	Astin	The more involved students are in activities and events on campus, the more likely it is they will be academically successful because having access to programs and services stimulates learning
		Student Departure	Tinto	Values of the institution, expressed through interactions, and those of the student may clash; which can ultimately lead the student to leave the institution in search of a better match

Family	Brief Description of Family	Contributing Theory	Theorist	Brief Theory Description
		Assessing Student Change	Pascarella	Five variables for students' growth and development: precollege traits such as socioeconomic status; the institution's structural or organizational characteristics, such as size and location; the campus culture or environment, socializing agents on campus, and the effort that students put forth

Psychosocial theories of student development relate to how people develop over time, with a focus on self-reflection and interpersonal aspects of students' lives (Long, 2012). Long (2012) identified the most influential theories in this group to include Chickering's concepts of how students' view themselves and progress in identity development, Phinney's application of identity development for all minority racial and ethnic groups, and Super's theory of career development and life-long vocational exploration and maturity. Institutional planning related to these theories has to do with building programs and services for ethnic minorities and students with alternative lifestyles, as well as career development.

Cognitive structural theories help explain how students interpret and assign meaning from their experiences (Long, 2012). The theories Long provided as influential examples include Perry's theory of four major cognitive development periods in which students perceive and organize knowledge and allow it to challenge their existing beliefs. This group also includes Kohlberg's theory of moral development which explains how reasoning impacts students' behavior and actions (Long, 2012). Park's theory of faith development, adapted from Perry's work, is described as the process of discovering and creating connections between experiences and events, providing meaning, and affirming spiritual beliefs (Long, 2012). The influence of these theories in program development within institutions is seen in service learning, first-year experience, discipline, community involvement, and campus ministries.

The third family of student development theories outlined by Long is humanistic-existential. This category of theories emphasizes the conditions for healthy growth and development and focus on the student's relationship to others. Balance, harmony, and purpose are highlighted. The key theory identified in this group is Hettler's model of physical, mental, and social wellness. These theories promote residence hall and recreational programming.

The final group of student development theories identified by Long is person-environment interactive theories. These focus on the overarching development of the student by focusing on the impact that the higher education environment has on the student as well as how the individual characteristic of the student might impede or enhance their own development. Long identifies three major influential theorists in this category: Astin, Tinto, and Pascarella. The first theory listed by Long is Astin's theory of student involvement

which posits that the more involved students are in activities and events on campus, the more likely it is they will be academically successful because having access to programs and services stimulates learning.

Another key theory Long identified in the person-environment interactive family is Vincent Tinto's theory of student departure to explain student retention. Tinto is a key figure in the study of student retention. Tinto's theory explains that the values of the institution, expressed through interactions, and those of the student may clash; which can ultimately lead the student to leave the institution in search of a better match. Long explains Tinto's theory in terms of three sources of conflict that can lead to student departure. The areas of conflict are academic issues, the students' inability to socially and culturally integrate with the institutional culture, or a low level of commitment to the institution. The thrust of the argument is that institutions must act deliberately in all three areas in order to decrease chances of student departure.

Tinto's major contribution to student retention is the concept that persistence is an outcome of the student's academic and social integration into the community of the institution. Tinto (1975) detailed a longitudinal model which drew connection between the environment, academic and social systems of the institution, and the individual student. The key concept in this model was integration and patterns of interaction between the student and the institution, especially during the first year of college.

Tinto's (1975; 2006) concepts originated through a combination of concepts from Durkheim (1961) and Spady (1970). Durkheim (1961) concluded that suicide is tied with a lack of integration into society, specifically insufficient integration regarding values and collective affiliation. Spady (1970) then made the connection between Durkheim's (1961)

notions of suicide and the view that college is another social system with its own social and values systems. Spady (1970) understood that insufficient integration into the social systems in college could lead to low commitment of the student to that social structure, thus decreasing their likelihood to stay at the college. Spady (1970) also expanded these notions by delineating academic and social affiliations and that "suicide" in this environment is not literal but academic in the sense that students have choices to voluntarily withdraw, be forced to withdraw due to poor grades or improper behavior. Integration may occur in academic or social realm and still result in the student's withdrawal. Even though he recognized that external factors contribute to a student's decision to stay or leave college, Tinto (1975) built on these ideas and promoted the concepts of a reciprocal functional relationship between both types of integration, one impacting the other, and that both should be built in order to gain commitment from the student to remain enrolled. Tinto (1975) says "it is the interplay between the individual's commitment to the goal of college completion and his commitment to the institution that determines whether or not the individual decides to drop out from college and the forms of dropout behavior the individual adopts" (p. 96). Tinto (1975) saw persistence as an "outcome of a longitudinal process of interactions between the individual and the institution (peers, faculty, administrations, etc.) in which he is registered" (p. 103).

The final theory that Long listed as influential in the person-environment interactive group is Pascarella's model for assessing student change. Long describes the model as having five variables for students' growth and development: precollege traits such as socioeconomic status; the institution's structural or organizational characteristics, such as size and location; the campus culture or environment, socializing agents on campus, and the effort that students put forth. Of interest to this research study is the fourth variable regarding socializing agents

because this has to do with the "frequency, content, and quality of student interactions with faculty, administrators, and student affairs professionals" (p. 53). The quality of effort is impacted by these interactions (Long, 2012).

Perspectives of student development. Kuh, Kinze, Buckley, Bridges, and Hayek (2006) focused their typology of understanding student development around Tinto's and Braxton's concepts of student departure; which, in turn, provide understanding of student success in college. The collection of theories in this area, as categorized by Long, would be in the person-environment interactive family. In their report, and illustrated in Table 2, Kuh et al., (2006) described the general concept of each perspective interwoven with several contributors to that particular area of understanding. Again, I present these to provide an understanding of the breadth of the scope of student development theories rather that deep exploration of each theory or theorists view. Kuh's et al., (2006) constructs represent sociological, organizational, psychological, cultural, and economic perspectives.

Table 2:

Kuh, Kinze, Buckley, Bridges, and Hayek's Major Theoretical Perspectives on Student Success

Perspective	Basic Concept	Major Contributor	Other Contributors
Sociological	Integration occurs as students separate from their group, transition by interacting with other groups, and incorporate the norms of the new group. Increased	Tinto (1975, 1987, 1993)	Braxton, Sullivan & Johnson; Pascarella & Terenzini; Kuh & Lund; Bean; Braxton & Lean; Berger;

Perspective	Basic Concept	Major Contributor	Other Contributors
	integration, particularly socially, correspond with increases in commitment to the institution and graduation.		Hurtado & Carter
Social Networks (Sociological)	The role of on and off-campus relationships and the extent to which they support students toward successful completion of academic progress.	Kuh & Love (2000)	Astin; Kuh, Kinzie, Schuh, & Whitt; Kuh, Schuh, Whitt, Andreas, Lyones, Strange, Krehbiel & MacKay; Pascarella & Terenzini; Tinto; Marsden; Berger & Milem; Attinasi; Skahill; Denny & Stryker; Pescosolido; Chamberlain
Organizational	Students' perceptions of executive decision-makers, fairness of institutional policies, and responsiveness of staff and faculty have a role in students' decisions	Bean (1983)	Berger & Braxton; Pike & Kuh; Braxton

Perspective	Basic Concept	Major Contributor	Other Contributors
	to stay or go.		
Psychological	An attitude-behavior theory which stresses the importance of student characteristics, such as self-efficacy and internal locus of control, needed for student success; also, that intelligence can be expanded via learning and experience, which is important for students who may doubt their abilities.	Bean & Eaton (2000); Dweck (2000)	Kuh; Olsen, Kuh, Schilling, Connolly, Simmons & Vesper; Bandura; Dweck & Leggett; Rousseau; Howard
Cultural	Students' perception of their fit with the institutional environment and its dominant norms and values which shapes how students think, feel, and the choices they make. Student satisfaction is determined by the influence of these factors and the extent to which students engage.	Astin (1997, 1993) Kuh, Kinzie, Schuh & Whitt (2005); Kuh, Schuh, Whitt, Anreas, Lyons, Strange,	Attinasi; Gonzalez; Kuh & Love; Rendon, Jalomo & Nora; Tierney; Jalomo; Torres; Turner; London; Nuñez & Cuccaro-Alamin; Torres; Swail; Cuyjet; Bourdieu & Passeron; Horvat; Lareau &

Perspective	Basic Concept	Major Contributor	Other Contributors
		Krehbiel & MacKay (1991); Kuh & Whitt (1988); Pascarella & Terenzini (1991, 1995)	Horvat; Harker; Lamont & Lareau
Economic	Costs and benefits of staying in college and participating in institutional activities outweigh the return students expect, they will skip the activities and leave college.	Braxton (2003)	Becker; Goldin, Katz & Kuziemko

The first perspective of student success described by Kuh et al. (2006) is the sociological perspective based on Tinto's social and academic integration concepts. These ideas rely upon the process of the student's separation from the group they were associated with, a transition period in which the student begins to associate with members of new groups, and incorporating or adopting values and behaviors of the new group. Kuh et al.'s (2006) description of Tinto's (1975, 1987, 1993) stance is that students unable to manage these steps effectively to ultimately adopt the values and behavior patterns of the institution,

will not integrate and will exit. In this view, the increased integration leads to increased commitment to the institution and to graduation which results in successful completion. Tied to these concepts is the idea that students carry expectations due to advantages from their families and social position. Braxton challenged Tinto's assertions and helped to refine the concepts, such as social integration, as a stronger predictor of persistence than academic integration. Other contributors added additional refinements such as applicability to all students, the difficulty in separating Tinto's stages, and the overall student experience as a broad integration concept. The basic premise remains the same, however, and it is the concept that as students adopt values and norms of various groups within the institution, the more integrated they become, the more likely they are to persist and graduate.

Kuh et al. (2006) identified social networks as a subset of the sociological perspective. Kuh et al. (2006) used Marsden's (2004) description of social networks as "structures of relationships linking social actors" (p. 2727). This theory builds on Tinto's concepts and hones in on the role of on and off-campus relationships and the extent to which they support students toward successful completion of academic progress. Other factors related to social networks include commuting versus residential student life as well as the level of family support and/or friendships.

The organizational perspective highlights the structure and processes of the institution (Kuh et al. 2006) such as the location, size, and selectivity. Kuh et al. (2006) lists Bean as the most frequently cited contributor to this view. Bean (1983) formulated the student attrition model outlining that students' beliefs are impacted by experiences with the institution which determines the students' sense of belonging or "fit". The idea is that students' perceptions of executive decision-makers, fairness of institutional policies, and responsiveness of staff and

faculty have a role in students' decisions to stay or go. Braxton also challenged these ideas and other contributors added some refinement to theory but the basic premise remains.

The psychological perspective outlined by Kuh et al. (2006) derives mainly from Bean and Eaton's (2000) attitude-behavior theory which stresses the importance of student characteristics, such as self-efficacy and internal locus of control needed for student success. Kuh et al. (2006) identified Dweck's (2000) furthering of this work by theorizing that intelligence can be expanded via learning and experience, which is a powerful concept for students who may doubt their abilities. Many others have contributed to the psychological perspective, including Kuh (1999) himself, relating motivational theories, expectancy theory, more on self-efficacy, and psychological "contract" theory which are believed to shape students' activities, relationship, and academic performance.

Another important perspective presented by Kuh et al. (2006) is cultural, and entails the student perception of their fit with the institutional environment and its dominant norms and values and shapes how students think, feel, and the choices they make. Student satisfaction, then, is determined by the influence of these factors and the extent to which students engage. Kuh et al. (2006) list several contributors to these basic concepts, not one in particular, and they are Astin (1997, 1993); Kuh, Kinzie, Schuh and Whitt (2005); Kuh, Schuh, Whitt, Andreas, Lyons, Strange, Krehbiel and MacKay (1991); Kuh and Whitt (1988); and Pascarella and Terenzini (1991, 1995). Variations and refinements of the cultural perspective abound and point to the institutional responsibility to facilitate how students resolve issues that arise when institutional norms and family norms are in conflict. Additionally, Kuh et al. (2006) explains that this body of work has been expanded by many contributors to specifically understand first-generation and ethnic-minority students; the

disparity between home and college life; their relationships and feelings of loneliness; aspirations; and meaning-making.

The final perspective outlined by Kuh et al. (2006) is the economic perspective of weighing the costs and benefits of staying and participating or leaving. This view incorporates Braxton's (2003) view that if students perceive the costs and benefits of staying in college and participating in orientation, study abroad and other institutional activities are more than the return they expect, they will skip the activities and leave college. Costs considered are beyond tuition, fees, and lost income whereas benefits include future earnings and quality of life.

As a whole, these student development theories provide a basis for the creation and maintenance of student affairs and student services divisions in higher education. They also illustrate the variety and purpose for which these units exit. Together, they present a comprehensive view of the array of factors and the complexities involved in students' decisions to stay in college or leave. Further, the student development theories portray the foundation for which my proposed research rests. Activities such as registering for classes each semester and speaking with an academic advisor are types of rituals students experience. The student support areas within higher education institutions offer students' many points of interaction. These interactions have potential to impact how a student perceives their value to the institution.

Retention for distance education. David Kember's (1989) model of dropout from distance education was important to my study because it highlights the role of the institution in providing support structures for online learners. His model encompasses the realities of students of distance education and the myriad choices they encounter through their academic

pursuits. Integration-related components are the ones in which the institution may have more influence on the students' decisions to persist.

Based on Tinto's (1975) model, Kember (1989) developed a linear model of drop-out particularly for distance education. Kember used case studies to illustrate, justify the components, and to interpret the model. Because of its linear nature, variables from one component impact the variables in the following components. Kember's model, shown in Figure 2, illustrates the importance of various factors to retention. The factors include personal characteristics of the student; intrinsic and extrinsic motivations to commit to goals; the environments of academic and social/work; integration into such environments; and the costs and benefits of attending college. The model illustrates students' progress towards two independent goals of dropping out or course completion. The model assumes progression through the components and includes looping which allows for changes that occur.

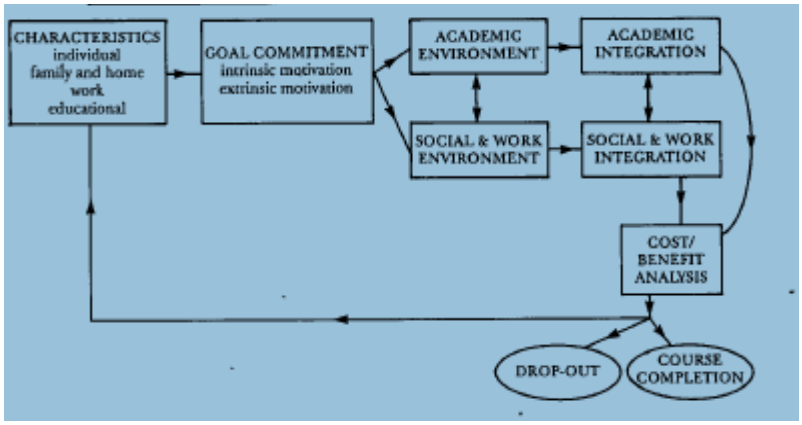

Figure 2: Kember's model of drop-out from distance education.

In Kember's model, the characteristics component identifies facets of individual, home and family, work, and education. Individual characteristics include goal commitment, academic environment, social and work integration and the interplay of influences between

them and the attitudes and behaviors of the student and the student's family and colleagues. The goal commitment component involves extrinsic and intrinsic motivation. Extrinsic motivators are the rewards that a student might receive by completing and receiving the degree, such as a job promotion or pay increase. Intrinsic motivation has to do with the student's interest and relevance in what they are learning.

The following integration components diverge from Tinto's (1975) model the most, as they are adapted for the distance education environment. The academic environment and integration component includes all aspects of the distance education course, including the learning materials and activities, tutoring, interactions with peers, faculty, or staff. This component involves collective affiliation, which has to do with the quality and quantity of contact between the student and the institution, and normative congruence, which has to do with the alignment of the curriculum and instructional modality to the students' interests and learning style. The social and work environment and integration component has to do with the degree to which the student is able to integrate work, social, and home life since most distance education students study at home and most students also work (Kember, 1989).

The cost/benefit analysis component has to do the student choosing one activity over the other such as going out with friends versus studying. Kember states that students with higher degrees of goal commitment will encounter the cost/benefit analysis less frequently.

Kember comments that the model allows for two outcomes, either drop-out or course completion, and that the drop-out model could also be viewed as a student progression model through distance education courses.

Student Engagement

My study relied on the concept that mattering is connected to student engagement and engagement is connected to retention. In this way, mattering indirectly influences students' decisions to persist. Concepts of engagement and mattering are conveyed through the theories of student development.

Vincent Tinto studied retention through the lens of student departure. Tinto's major contribution to the field of student retention is the concept that persistence in an outcome of the student's academic and social integration into the community of the institution. Tinto (1993) claimed that when students engage with the university, by connecting in meaningful ways through academic and social activities, they are more likely to persist. Astin (1999) examined different types of engagement and their relationship with persistence. Astin's theory of student involvement posits that the more involved students are in activities and events on campus the more likely it is they will be academically successful. Basically, his theory suggests that access to programs and services stimulates learning. The collective works of Tinto and Astin provide a rich foundation for understanding factors of engagement that lead to increased persistence.

Tinto's theories of student integration and departure are cited thousands of times in academic literature. His theories have also been challenged. Criticisms of Tinto's work include four issues: 1) the difficulty in testing all fifteen propositions that comprise his theories because of the breadth of groups of students and types of institutions that need to be included in the testing; 2) Tinto's propositions do not reflect other important perspectives such as organizational and economic influences; and, 3) not even the criticisms of Tinto's work have been critiqued (Braxton & Sullivan, 1997). These issues are important. However,

it is also important to note that Tinto's theories are deeply embedded in practices within student affairs, as a quick look at the first page of a simple Google search shows - his work has been cited over 26,000 times. Because of its anchoring into current institutional practices, I chose to highlight Tinto's work as part of the foundation of my own.

Of specific importance to my study, Tovar (2013) built on Tinto and Astin's work by examining factors that contribute to student retention. The factors he looked at included institutional commitment to students, mattering, sense of belonging, interactions with diverse peers, perceptions of the campus climate, engagement/involvement, socio-academic integrative experiences, and goal commitment collectively affected community college students' intent to persist to degree completion. His study combined these constructs into one framework for understanding persistence. Tovar's work is important to my study because it demonstrated that mattering to the institution exerts a moderate to strong influence on community college students' engagement/involvement, socio-academic integrative experiences, sense of belonging, and indirectly on intent to persist.

Mattering Theory

Mattering is "the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliot, Kao, & Grant, 2004). A pivotal student development theory forming the foundation of my proposed research is Nancy Schlossberg's (1989) theories of mattering and marginality. Her work is critical to my hypothesis and a key factor I tested for in my study.

The theory of mattering was first empirically introduced by Morris Rosenberg and B. Claire McCullough (1981). They studied the role of parental mattering in adolescent mental health and describe mattering as "a motive: the feeling that others depend on us, are

interested in us, are concerned with our fate, or experience as an ego-extension exercises a powerful influence on our actions" (Rosenberg & McCullough, 1981, p. 165). In their work, Rosenberg and McCullough (1981) found that mattering is important for individuals as well as society. Regarding individuals, they found that the more adolescents feel important, significant, or wanted by their parents the higher their self-esteem, the more improved their moods were, and the less likely they were to have delinquency issues. With regards to society, they found that mattering provides a significant source of social cohesion, the binding force being our dependence on each other.

The guiding student development theory for my study was Nancy Schlossberg's theory of mattering. I present Schlossberg's (1989) theory of mattering and marginality for student development because I used an instrument specifically designed to measure students' feelings of mattering in one section of my survey. The major issue with mattering theory has been with determining what it is in order to empirically test it (Marshall, 2001). Instruments have been developed and tested to ensure construct validity for the measure of mattering (Schlossberg, Lassalle & Golec, 1990; Elliot, Kao & Grant, 2004; Tovar, Simon & Lee, 2009; France, 2011).

Schlossberg's theory of mattering and marginality. Schlossberg (1989) built on Rosenberg and McCullough's (1981) work discussing constructs of mattering claiming that mattering is a motivator, a powerful driver of social integration. Mattering is the belief that we matter; Schlossberg's mattering theory has five constructs (Schlossberg, 1989):

- Attention – the feeling that one commands the interest of another
- Importance – the belief that someone else cares about what we do or think

- Ego-Extension – the belief that others will be proud of our accomplishments or saddened by our failures
- Dependence – the belief that others "need" us
- Appreciation – the belief that our efforts are appreciated

If mattering is the bright side of Schlossberg's (1989) concept, the counterpoint to mattering she defines as marginality. Marginality is the opposite perception of mattering, which means that people feel they do not command the interest of another; do not believe that anyone cares, thinks about, is proud or saddened by what they think or do, or that their efforts are appreciated. Students who feel marginalized may experience feelings of irritability and self-consciousness when in new environments or taking on new roles with their accompanying expectations. Marginality can occur as a temporary or permanent condition. A temporary condition such as when a person is in transition, such as entering an unfamiliar environment for the first time or starting college. The marginalization may be major or minor depending on the difference between the former and latter roles. One type of permanent condition that Schlossberg (1989) describes as a personality type was first expressed by Park (1928) as someone who is living in the culture and traditions of two distinct peoples, not breaking from the past and not quite accepted into the new group. This situation can evoke duality of feelings such as pride and shame, love and hate. In this situation, the person becomes obsessed with marginality and may even become professionally involved in the topic of their marginality. Another type of permanent condition of marginality is a way of life for bicultural individuals. These people are permanently between two worlds, identifying with two cultures simultaneously. Schlossberg (1989) provides the example of a Hispanic

student from the United States may feel American but also take pride their Spanish heritage. Schlossberg (1989) states that when people feel they matter they no longer feel marginalized.

The final piece of Schlossberg's (1989) mattering theory is the role of rituals and their ability to facilitate transition, to make sense of separating, or letting go of, the "old" group to transition to the "new" group when they enter college, for example. Rituals are a way to minimize marginality and to help students expand their identities to make the transition into a new environment, group or activity. Similarly, some aspects of services to students are ritualistic or cyclical in nature as the terms begin and end. For example, as the beginning of each semester approaches, students search the course catalog, register for classes, purchase books, pay for tuition, and perhaps seek advising, financial aid, or personal counseling.

The implications of Schlossberg's (1989) work for higher education is that it is important to ensure that institutional programs, policies, and practices help students feel that they matter, as their level of mattering is a motivator and shapes students' decisions to persist. Creating or maintaining rituals, even acknowledging the frequent and various transitions that students encounter, can help students feel connected with the past while moving forward into the future, minimizing marginality and making them feel they matter.

Support Services for Online Students

My study was based on a comprehensive model of support services designed specifically for online learners. Conceptual and theoretical frameworks aid our understanding of persistence on online students. In this study, I hypothesized that the types of services that support online students, and their accessibility and utilization, contribute to students feeling that they matter to the institution.

It is important that online services be available for all students but it is challenging for institutions to not only provide comprehensive and effective services but to also find meaningful ways to connect the student to those services (Crawley & Fetzner, 2013). “The challenge in developing student services to support the academic program is to make the services equally accessible and valuable as the academic program. The student support services should pose no barriers to the student’s successful progress with the academic program but rather should support and promote that progress” (Dirr, 1998, p. 5). To Dirr’s comments, I add that the services should also be relevant to the distance learner. These practices, in turn, have the capacity to connect the student with the institution and to promote students’ feelings of mattering to the institution.

Support services have the potential to enhance the enrollment of online students by facilitating the adjustments necessary to perform in college as well as in the online learning environment (Dirr, 1998; LaPadula, 2003). Generally, support services abound for the traditional student attending college in brick and mortar environment with face-to-face contact (LaPadula, 2003). However, the range of services available for the online students is often lacking; “traditional student services solutions are no longer adequate” (LaPadula, 2003). Services should be redesigned to serve online learners (Dirr, 1998). Interest in student support for distance education has grown because of the increase in online leaning but “there is a general lack of empirical research guiding the design of effective student support systems in distance education” (Visser & Visser, 2000, p. 110).

Service planning. The importance of support services for online students is clear (Crawly & Fetzner, 2013). Planning for the full array of services in the online environment

"will be rigorous, comprehensive, and attentive to details" (Crawley, 2012, p. 179). Several studies have contributed to identifying the scope of services for online students.

LaPadula (2003) conducted a study to determine student satisfaction with existing online student services at New York Institute of Technology (NYIT) and to find out what types of services would be most desirable for students as they planned for the future. NYIT offered a wide variety of on-campus student services including many that were considered beyond the administrative core of registration, admissions, financial aid and scholarships. LaPadula (2003) performed a review to determine the services offered by other institutions via institutional websites and descriptions of the programs found in journal articles. She then conducted a student survey to determine student satisfaction with the services. Services were identified and placed into three categories: 1) academic advising/career counseling, 2) personal/mental health counseling, and 3) services that promote a sense of community. Comparing the array of services found in the review process to NYIT's available services, only a few of the on-campus services were available online. While students expressed satisfaction with existing services, students also desired to have additional services such as book clubs, a student newspaper, academic clubs, tutoring, seminars on life skills, and counseling. LaPadula's study was important to my study because it illustrates the wide scope of services that online students want to access.

Three support mechanisms are typical of distance education programs and institutions: academic support, affective support, and administrative support (Visser & Visser, 2000). Academic support provides students with tools and resources to improve performance in a particular course. Affective support relates to motivations needs. Instructors or peers often supply this type of support. Administrative support refers to providing

guidance in administrative or logistical components of a course or program, such as registration. Administrative support staff typically offer this type of support. The authors conducted a study to contribute to the knowledge base in student support by determining the academic, affective, and administrative support expectations of distance education students. They also sought to compare actual student support expectations of distance education students with the instructor's perceptions of students' expectations of student support. The second objective recognizes the instructor's role in providing academic and affective support. Findings from their study highlight the instructor's role in student support since students overwhelmingly identify the instructor as the most important source of support for them. Integration of motivational and administrative support with cognitive support meets needs of learners better. The study revealed that few instructors received training in teaching at a distance and that few instructors had experienced distance learning. Training and experience help instructors meet the support needs of students. They found that reducing the sense of isolation is most important in meeting affective needs of distance learners. Support mechanisms such as collaborative learning techniques to ensure student participation and involvement in the course can alleviate the sense of isolation. And, finally, students emphasized the need for cognitive support from instructors. Thus, providing tools for determining the needs of students by monitoring progress and providing feedback will facilitate student cognitive support.

The Visser and Visser (2000) study emphasized the institutional support needed for faculty to be able to support student academic, affective and cognitive needs in distance education. Even though the faculty perspective is beyond the scope of my study, the Visser and Visser (2000) study is important because it represents the need for institutions to

consider the broader context of scope of services, the expansive range of services, the range of needs they meet for students and faculty, and to rethink not only which services to offer but how they are offered.

In another study, twelve quality frameworks for online learning indicated that support was perceived as an indicator of quality (Stewart, Goodson, Miertschin, Norwood & Ezell, 2013). The authors observed services to support online learners in order to identify the support services needed and offered within the case they studied. The conclusions of the authors were that "student support services play a valued and integral part in quality online educational delivery" (p. 300) and "student support is a recognized and valued component of quality in online programs" (p. 300). Through the case study, the authors found that the scope of services needed is quite broad and involved collaborative efforts between administrators, faculty, and staff program leaders. The range of services Stewart, et al. (2013) identified include: admissions and registration; academic advising; orientations to the University and to online learning; academic support services; scholarships and awards; library resources; computing and technology resources; articulation and transfer; and career placement. Stewart, et al. (2013) also discovered that online learners have needs for communication and connectivity throughout the various support systems. Stewart, et al. (2013) report difficulty in tracking student outcomes; however, two of the programs intended to assist students with transitions and success "yielded strong evidence of positive impacts on students through interim grade reports and mentoring sessions" (p. 299). This study informs my research by identifying the breadth of services that online students need and reporting that the services have a positive impact on student success.

Spider web of services. The "spider web of services" framework, shown in Figure 3, can be used for planning, implementation, and evaluation of online service programs (Crawley, 2012). The spider web organizes thirty-one various support services into five categories of functions: academic services, communications, administrative core, student communities, and personal services. The web is useful in identifying services to build into support programming and understanding the breadth of services to provide in order to meet a variety of student needs.

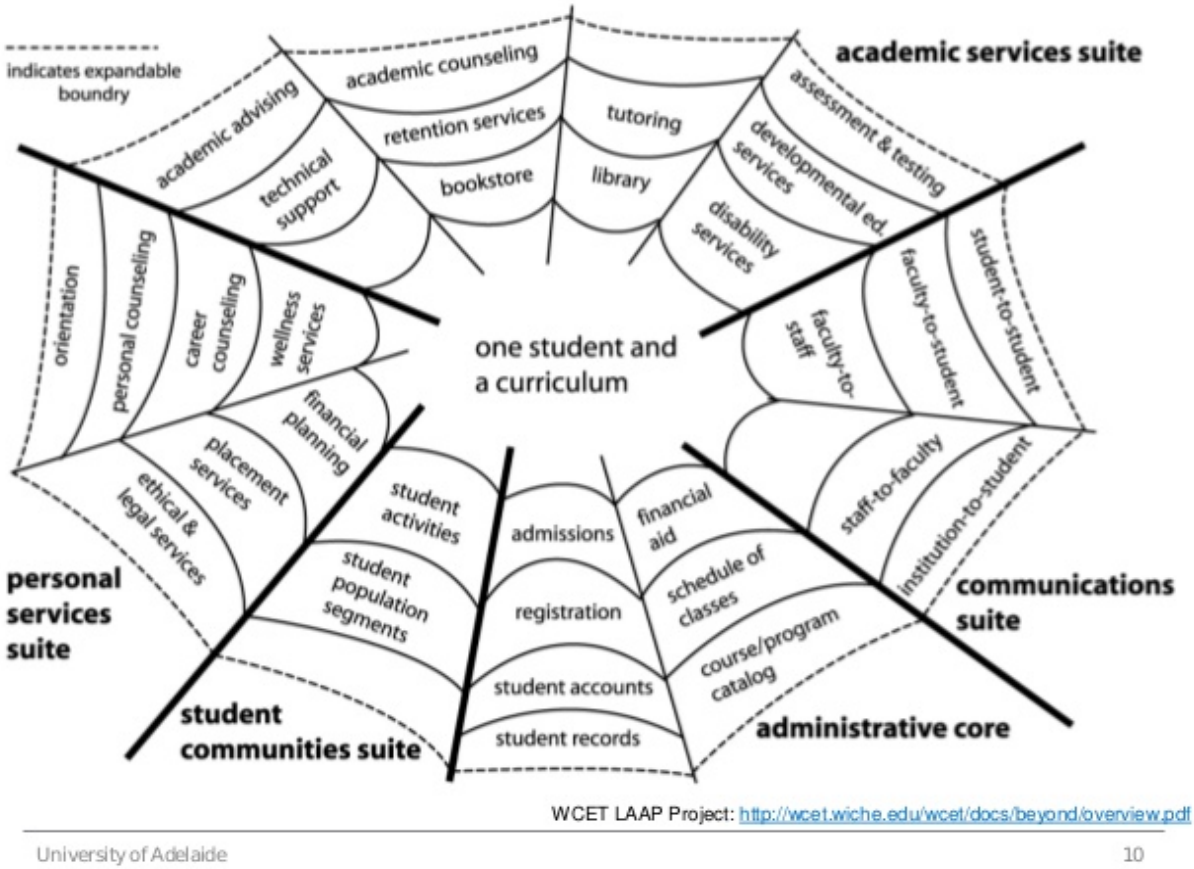

Figure 3: WCET's "spider web" of services.

The spider web framework was developed by the WICHE Cooperative for Educational Telecommunications (WCET) (Shea & Armitage, 2002), as part of the U.S. Department of Education, and the Fund for the Improvement of Postsecondary Education Learning Anytime Any Place (FIPSE LAAP) grant "Beyond the Administrative Core" project. The project highlighted the need for institutions to provide time- and location-independent student support services that are beyond the "administrative core," e.g., admissions, financial aid, and registration. The overview states, “serving the off-campus student has not been part of the mainstream campus agenda for most institutions due to a lack of both the resources and the flexibility to meet the unique needs of these students” (p. 1). The WCET framework, the “spider web of services” provides the consideration of the scope of student support services that online students need (Shea & Armitage, 2002).

Beyond the Administrative Core: Creating Web-based Student Services for Online Learners was a project funded by the U.S. Department of Education's Fund for the Improvement of Postsecondary Education. It was a three-year collaborative project from January 2000 to December 2002, with three higher education institutions and a corporate partner. The project discovered that students participating in distance education academic programs must have access to student support services. They determined that one of the biggest gaps in online education is institutions' inability to provide time- and location-independent access to a complete array of student support services. The most common services incorporated into a time- and location-independent format are those within the "administrative core" (admissions, financial aid, registration, etc.). However, online learners also need online access to traditional student support offerings such as tutoring, academic advisement, personal counseling, career counseling, and library services. The Beyond the

Administrative Core initiative supported the three institutions to provide these services. The project also produced guidelines for creating student services online. Additionally, the Center for Transforming Student Services (CENTSS) developed the CENTSS audit tool to provide institutions with a systematic process for examining these remotely delivered student services (Crawley, 2012). Unfortunately, the audit tool is now proprietary and is no longer available for use.

The "spider web" framework was a key element in my study. I used the framework in the survey design to ascertain from students which services they did or did not use and why, as well as to provide a springboard for students to discuss their best and worst service interactions. I chose this framework because it is the most clearly organized and comprehensive collection of support services.

Service interactions. Over 4000 individual institutions of higher education exist in America today (Raisman, 2008). The types of institutions range from colleges, universities, private, public, two-year, and four-year. While each of them have business functions, higher education is distinct from business models. The product of higher education is learning. While an institution may produce a transcript or diploma as evidence of completion, and the student will have met certain requirements in order to have obtained the recognition of completion, the actual learning is intangible and subjectively determined by the student, employer or graduate school expectations. Customer service, within the higher education context, is also distinctive from business models. "Those who are at the forefront of reform in student support services for distance learners seem to take a lesson from today's business world: to be successful, you must emphasize customer service" (Dirr, 1998).

Not only is it important to provide the array of services distance education student need, but equally important is the interaction the student has with the service. “The way customers and providers interact matters for the customers, the providers, and the organization in which providers work” (Gutek, 1995, p. 4). In this context, the terms “students” and “customers” are used interchangeably. “Customer services issues account for as much as 72% of all attrition” (Raisman, 2008, p. 23)

A customer is “any recipient, client, patient, student, or consumer of any kind of product or service” (Gutek, 1995, p.1) and a provider as “workers in all jobs involved in the delivery of goods or services to a customer” (p. 1). While these definitions are quite broad, for purposes of my study, I will use the terms within the narrow context of distance learning students as customers and the institution as the provider of the breadth of services online leaners need.

Gutek (1995) identified two forms of interaction between customers and providers: relationships and encounters. The characteristics of relationship-style of interactions between a customer and provider include repeated contact with a particular individual; getting to know each other; expecting and anticipating future contact; and the development of a shared history. In these interactions, the trust relationship grows. The customer and provider get to know each other and have a shared history; they get attached to one another and have a certain level of commitment and interdependence. These relationships develop over time and are labor-intensive.

In contrast, Gutek (1995) characterizes encounter-style interactions as single, fleeting interactions that will typically occur with different providers, where the customer and provider remain strangers. In the encounter-style interaction, the providers, even though they

can be different people, are expected to function similarly. The major weakness of this style of interaction is that "individual providers have little incentive to deliver high-quality goods or services because they do not anticipate interacting with the same customers in the future" (p. 46). These interactions also do not engender politeness, for the same reasons (Gutek, 1995).

In relationship-style interactions, customers and providers have frequent contact and can change processes flexibly and over time, as needed. Encounter interactions do not, on their own, get more efficient over time (Gutek, 1995). Encounter systems, described as being embedded in organizations, are designed and managed for efficiency (Gutek, 1995). In the optimal situation, the system is designed around volume and type of customer questions, length of time needed for the provider to resolve issues, and how many providers are required to fulfill customer needs efficiently (Gutek, 1995). To improve the encounter system means the system has to be changed, often requiring analysis of the process, testing a new method, and training multiple providers in order to maintain consistency. Encounter systems have to be managed because they do not have the constant feedback loop and accountability as in a relationship where providers are more readily intrinsically motivated to fulfill customer needs (Gutek, 1995).

Encounters are designed toward efficiency but may not be because: 1) often customers need multiple encounters to resolve a transaction. Even if each encounter may be quick, combined, they take time and may or may not be a pleasant experience; 2) encounter systems are costly due to the considerable levels coordination and management required to have them. They simply may not be staffed properly; 3) the jobs are often tedious and monotonous even when fast paced. This may result in high turnover and dissatisfied

employees; and, 4) improvements to encounter systems require time, effort, and money (Gutek, 1995).

Customers interact with a variety of providers in encounter relationships. When those interactions are positive occurrences, the individual and organization are seen as positive. However,

> if service is bad several times in a row, or if goods are repeatedly shoddy, the customer is likely to attribute problems to the organization rather than to each of the individual providers. Since customers encounter different providers in each interaction, it is less likely (they reason) that all providers are inadequate or all situations unfavorable; more likely the organization itself is to blame (Gutek, 1995, p. 87).

What the customers and providers are looking for in an encounter is to make a positive experience (Gutek, 1995). The customer wants fast, reliable service that is responsive and accurate and is delivered with empathy. From the provider perspective, a positive experience is one that is fast and efficient because they take a minimal amount of time, have relevant information available, is forthcoming with information, and allows the provider to complete this transaction in order to move on to the next.

It is important to understand the distinction of encounter- and relationship-style interactions because the higher education environment provides a hybridized service context with a mix of both relationship and encounter-based interactions. Gutek (1995) referred to this blending as a pseudorelationship. My study involved online students at UNM and students' use of services through online.unm.edu. The survey included a comprehensive list of services, as outlined by the WCET spider web of services framework, and also asked

students about the type on encounter they experienced. I wanted to examine the fuller view of services for distance education students which includes the scope of services, the type of interactions students encounter, and the quality of those interactions. Together, this provided a road map for adjustments and improvements in order to provide services that instill, in online students, a feeling that they matter to the institution.

Services and retention. As distance education continues to grow and retention rates for distance learners remain in decline, institutions will need to take a closer look at services to support distance education students. "Several administrators concur that course-completion rates are often 10 to 20 percentage points higher in traditional courses than in distance offerings" (Carr, 2000, p.1). "While a number of factors influence a student's decision to persist or dropout, it will become increasingly important for online program administrators to control institutional factors that support student participation and success" (Tello, 2007, p. 60).

Lone Star College implemented comprehensive student support services for their online students (Britto & Rush, 2013). Lone Star experienced growing enrollments into online programs and decided to ensure a full range of quality services for their online students. To do so, in 2011 Lone Star invested long term funds and resources adding a new unit into their infrastructure devoted to online student support services. The goals of the program were to: 1) provide comparable services for online students and face-to-face students and 2) increase completion and success rates for online students to bring them on par with the face-to-face student population. Lone Star implemented a comprehensive list of services including technical support, early alert systems to identify struggling students, advising services, case management advising, online readiness assessment, student

orientation, tutoring, and an e-newsletter. The results were positive. In less than a year from its inception, the support unit hired seven additional part-time advisors and one full-time. They also expanded services to 53%, increasing availability in the evenings on weekends. Online advising hours averaged 15 hours more per week than the face-to-face services and then had the issue of face-to-face students seeking the online service because of its efficiently and availability. At the time of the article publication Lone Star had not yet determined the impact of services on the success rate. Knowing they could not establish a causal relationship between the two, they anticipated an overall positive impact. Even though Britto and Rush (2013), at the time of publication, did not have data to support that their service initiatives impacted completion and success rates for their online students, this study was important for my research because it highlights the need to support distance education students and that the services are linked with retention. I attempted to reach Britto and Rush at Lone Star College to follow up on their results. Britto has moved on to another institution. Rush has moved to another role at Lone Star and did not think the initiative was followed through.

Proactive interventions from the institution to its online students maximize student retention, determine who to target for interventions, the types of retention possible, and the media to use (Simpson, 2004). Findings from this study show that: 1) “less than one-third of students make significant contact” (Simpson, 2004, p. 80) with student support systems; 2) “students who do make contact often appear to be more articulate and assertive” (p. 80); 3) “at every stage it seems probable that students who are most likely to complete get the most support (p. 80); and, proactive contacts or interventions “are important because they reach students who might not make contact with the student support system otherwise and may be more likely to drop out” (p. 81). Simpson’s (2004) work produced evidence that

interventions can increase student retention and that these programs can be cost-effective within university resources. Simpson's (2004) work was done in the United Kingdom but has implications for online support in the U.S. as well. This study supported my hypothesis that the more online learners utilize support services, the more likely they are to feel they matter to UNM which is then connected to their decision to persist.

"Situational barriers accounted for 62% of the reasons non-persisters provided for withdrawing from their online course" with the primary reason being work commitments (Tello, 2007, p. 58). In his study, Tello (2007) examined the frequency and method of instructional interaction in online courses, student attitudes regarding interactions, and reasons for persistence or withdrawal from courses. The investigation was focused on the relationship between instructional interactions and student persistence in online students. However, 46% of persisters in the online courses identified institutional barriers as the reason they did not intend to take future online courses, mostly (29%) because the course they needed was not offered online. The study highlights the role of the faculty and instructional design for activities and their impact on student attitudes about online courses. Additionally, Tello (2007) identified situational and demographic characteristics of students enrolled in online courses and discovered that most non-persisters report working more than 40 hours per week for pay. Situational barriers, including work and family commitments as well as the time it takes to be a student, are the primary reasons non-persisters report for choosing to withdraw from online courses. Online students are busy people! This has implications for designing programs that support students as they balance competing demands on their time. My study illustrates the need for support services for distance learners to be as accessible as instruction.

Twenty experts identified priority issues or concerns that influence student retention in fully online undergraduate higher education programs (Hayman, 2010). Three emergent themes arose from the Delphi three-round process:

1. Student Support and Student Connection with the Institution.
2. Quality of Interaction between Faculty and Students.
3. Student Self-Discipline.

Interestingly, the themes align with the students' relationship with the institution, the instructor, and themselves, respectively, and illustrate the integration of them for student retention. The most frequently occurring theme identified in this study, and the one most pertinent to my study, was the need for student support. The panelists recommend that students in online programs should be provided with adequate and ongoing institutional support in all areas (financial aid, academic, counseling, tutoring). These recommendations relate to Tinto's Student Integration Model and Bean's Model of Student Departure linking students' sense of connection to the school and positive retention. This study supported my research because it relates support services to retention and engagement.

A study of student barriers to online learning identified four most critical student barriers to online learning: a) social interaction; b) administrative/instructor issues; c) learner motivation; and, d) time/support for studies (Muilenburg & Berge, 2007). The study also focused on the five independent variables having the most effect on the four barriers listed: a) ability and confidence with online learning technology; b) effectiveness of online learning; c) online learning enjoyment; d) online courses completed; and, e) the likelihood of taking a future online course. Not surprisingly, participants with the highest level of technology use and confidence perceived few barriers for social interaction, administrative/instructor issues,

learner motivation, and time/support for their studies. Students who claimed to not learn well online had the highest barrier ratings. Students who did not enjoy learning in the online learning environment also had significantly higher barrier ratings. Once a student completed just one online course, the findings revealed a large drop in perceived barriers. Fear of the unknown seemed to play an important role in this. Participants achieving social interaction were more likely to consider taking a future online course. The findings indicate that "a lack of social interaction was the most severe barrier as perceived by students overall" (p. 45) and that social interaction is linked to enjoyment of the course and effectiveness of learning as well as taking future online courses. These findings, while having a different focus than my study, are valuable because they underscore the need for the online student to feel connected and the importance of the institution to facilitate the students' success, particularly in the students' first online course.

Hachey, Wladis, and Conway (2012) studied patterns of experience with and/or exposure to online learning courses that lead to improved student retention. In this quantitative study, the researchers looked at two sets of data: 1) the differences in online and face-to-face success rates, and 2) an analysis of the effect of prior online course experience and courses on current online success and retention. They found that some prior success in online courses seems to raise the chances of future online success. Having one prior successful online experience may have positive impacts. They allowed for the possibility that other facts may be at play and that further research is needed to confirm this. Their findings have implications for student support programming. Their findings suggest the services could be targeted to those students who earn a grade of "D" or below in an online course since these students have a higher likelihood of dropping out or failing. To take their findings a

step further, programming could target those students who are first-time online course enrollees and perhaps facilitate the student's successful completion, providing them the confidence and connection.

Interviews with students who left institutions through the transfer process or dropping out found that "the bottom line reasons for leaving went to issues such as the school's indifference to them; not feeling valued; rude, unsympathetic, non-responsive or unfriendly staff, faculty or administrators; a general feeling which can be encapsulated in the oft heard phrase, 'All they cared about was my money" (Raisman, 2008, p. 23). Raisman (2008) also claims that "our research shows that most attrition, drops, step-outs, whatever you wish to call them leave a school because of reasons that fall directly into the category of customer service" (p. 17). Raisman (2008) describes customer service in the higher education environment to be important due to the business-like realities of budgets. However, he also describes customer services as different than the business model because higher education provides a "multiplicity of intangibles like thoughts, ideas, learning, intelligences, skills, possibilities and potential" (p. 18). Raisman (2008) describes the student as having higher worth and value after interacting with the institution because the merchandise is the student themselves. The interactions that increase this worth include the people, services and products of the institution. He adds that being treated with value and importance is an expectation for all parties (Raisman, 2008). Raisman's research is anecdotal and reported through his books. He does not provide details about his research in either of his books and does not have studies published in peer-reviewed journals. Nevertheless, Raisman's work strongly supported my rationale to study the breadth of services, service interactions, and the effect of students' feelings of mattering because these aspects impact student retention.

Measuring Mattering

Several instruments have been developed to measure mattering. Schlossberg, Lassalle, and Golec (1990) developed the Mattering Scales for Adult Students in Higher Education (MHE) for measuring adult students' perceptions of their educational environment. The tool assesses how students feel they mattered as a means of determining their fit with the educational environment. The five mattering scales Schlossberg, et al (1990) developed were to measure students' perceptions in the categories of administration, advising, peer interaction, multiple roles, and interaction with faculty. The purpose of the instrument was for colleges to determine if their institutional policies, practices, and activities facilitate students' feelings of being valued by the institution. This was the first instrument developed to measure mattering for higher education purposes. For my study, I used a shorter variation of this instrument, the Unified Measure of University Mattering – 15 (UMUM 15), developed by Megan K. France (2011) and based on these instruments and others.

Elliot, Kao, and Grant (2004) constructed and validated a mattering index using self-consciousness, self-esteem, self-monitoring, alienation, and perceived social support in relation to college students. Their analysis yielded two key results. The first result was a 24-item index to measure mattering that has high levels of content validity, construct validity, and discriminant validity. In other words, the index developed by Elliot, Kao, and Grant (2004) covers various components of mattering; it measures what the researchers designed it to measure; and, it does not traverse to other constructs that are related to mattering. Using the index in their study, they found that "mattering is positively related to self-esteem and perceived social support; it is negatively associated with all forms of self-consciousness and alienation; mattering is correlated positively with the public performance factor of self-

monitoring but negatively with the other directed factors" (p. 349). The other key result of Elliot, Kao, and Grant's (2004) research is that while "importance" and "awareness" are highly linked with mattering, their study supports Rosenberg and McCullough's (1981) assertion that mattering is a primary motivator of self-concept. This is further evidence that studying mattering was a worthwhile endeavor.

Dixon Rayle and Chung (2007-2008) surveyed first-year college students to measure academic stress, social support from family and friends, and mattering to friends and the college. Their findings report that social support from family and friends was the most powerful predictor of mattering and students' mattering to the college was the most powerful predictor of academic stress levels.

Tovar, Simon, and Lee (2009) developed and validated the College Mattering Inventory for use in higher education. These authors support the theories put forth by Rosenberg and McCullough (1981) and Schlossberg (1989) but also "believe that mattering is contextual and object specific" meaning that it is the students' "relationship to specific others (e.g., faculty, counselors/advisors, and other students) that may best attest to their feelings of mattering or not mattering" (p. 159).

Though many of these studies are within the context of higher education, none of them address support services for distance education students. Klug (2008) conducted a qualitative study on public college students' perceptions of mattering to discover five themes that related to Rosenberg and McCullough's (1981) and Schlossberg's (1989) aspects of mattering. Klug's study suggests that staff and faculty can assist in creating a sense of mattering for students. Sumner (2012) replicated Klug's (2008) study with college students at a private faith-based institution. Not surprisingly, Sumner's research identified the same

themes that Klug identified with the addition of another theme relating to a higher power and perceptions of mattering.

Testa-Buzzee (2014) examined college persistence with single mothers and found no correlation between mattering and persistence. However, based on the findings, Testa-Buzzee recommends employing mattering practices to support students. These practices include designing programs to serve at-risk populations; providing professional development to facilitate understanding of the mattering construct; and designing programs that support students by focusing on commonalities, such as single parenting.

Mullen (2016) researched different types of nontraditional students at three small private Catholic four-year undergraduate institutions, and their perceptions of mattering to determine if their needs differ. Overall retention rates reflected that students felt as if they mattered and fit in but this could not be determined specifically for nontraditional students. Recommended practices were to track nontraditional students; develop a standardized nontraditional retention formula; increase attention to the institutions advising areas; and, facilitate student transitions.

Gap in Research

Current research on support structures identifies that the support needs for online students are different that those needed in traditional learning settings. These resources also discuss the types of services institutions do, or could, offer in support of students. Retention issues of distance education students, in general, focus on instructional strategies, the role of the instructor, and engagement of distance education learners in the online learning environment. Certainly, instruction, instructors, and the ability to engage students at the instructional level is paramount for student success and is ripe for further investigation

outside the scope of my study. Additionally, to reiterate, many factors outside the domain of the institution impact students' decisions to stay or leave an institution.

My research is unique in that it highlights points of interaction between the student and the institution that are outside the arena of instruction but with which the student must interact to varying degrees, depending on the service and the students' need. The types, quality, and accessibility of service offerings are within the control of the institution. My research connects the comprehensiveness of support services needed for distance education students to students' feelings of mattering. Combined, these factors may influence students' decisions to persist. My study contributed to the field of higher education because it specifically looked at support services for online learners and their impact on students' feelings of mattering. My research may lead institutions to offer a stronger complement of services for online students, which may influence student retention.

Summary

Distance education and student development theories form the foundations of promoting student success through student affairs and student services practices in higher education (Gillett-Karam, 2016). Gutek's (1995) social interactions within the service model along with Schlossberg's (1989) mattering concepts provide a framework for understanding the importance of the connections students make with representatives of the institutions. Staff and faculty can positively impact students "by directly demonstrating how important students are to them individually or to the college as a whole and how they rely on them to contribute to the successful experiences of the class and other students" (Tovar, Simon, & Lee, 2009, p. 175).

A conceptual framework for services was developed by the Western Interstate Commission for Higher Education, or WICHE, Cooperative for Educational Technologies (WCET). The WCET "spider web" of services (Shea & Armitage, 2002) was used to identify a comprehensive collection of services recommended for online learners. Student development theories provide insight into the complexities of student retention and, in particular, retention of online students. And, a closer look at Schlossberg's (1989) theory of mattering and marginality provides an important linkage between institutionally offered support services and their feelings of mattering to the institution, which then may influence distance education students' decisions to persist.

Chapter 3: Methodology

Introduction

Student interest in distance education is strong (U.S. Department of Education, National Center for Education Statistics, 2012), but the online student dropout and failure rate is high compared to students in face-to-face classes (Britto & Rush, 2013; Carr, 2000; Kember, 1995; Simpson, 2004; Pierrakeas, Xenos, Panagiotakopoulos & Vergidis, 2004). Services that support the online learner have an increasingly important role in sustaining enrollments to successful completion (Crawley, 2012; Raisman, 2008). The purpose of this study was to answer my research question: What is the relationship of student support services with students' sense of mattering for online students attending UNM?

The sub-questions of this research were:

- What support services do distance education students utilize and why?
- What is the relationship between students' feelings of mattering and their use of support services?
- How did the students' interactions with services impact their sense of mattering to the institution?

I hypothesized a positive relationship between the use of support services and students' feelings of mattering. The literature demonstrates that feelings of mattering to the institution may contribute to students' decisions to persist in school.

The relationship of students' use of services to their feelings of mattering to the institution is a complex matter. My study utilized a survey for quantitative and qualitative data collection to provide a description of the distance education students and the services they utilize. Qualitative data provided a description of the context (Merriam, 2009) of the

services and the students' experiences with services. Quantitative data provided descriptive and inferential statistics which, along with the qualitative questions, helped to answer my research question.

Benefits of Using a Multiple Methods Approach

Using a multiple methods approach with quantitative and qualitative data "provides strengths that offset the weaknesses of both quantitative and qualitative research" (Creswell & Clark, 2011, p. 12). Unlike quantitative research, qualitative research provides an understanding of context and means for expression for those who may otherwise not have the opportunity while allowing the researcher to openly share his or her own biases (Creswell & Clark, 2011). On the other hand, quantitative research is more readily generalizable to a larger group. The benefits of multiple methods are that they provide more evidence for studying the problem than either method would provide alone and expands the ability to use all tools of data collection available (Creswell & Clark, 2011). For my study, the qualitative data collection and analysis contributed to the description of the case (Merriam, 2009) and was used with quantitative data to help describe a relationship between the variables and provide a deeper understanding of the student experience.

Pragmatic Research Philosophy

My research philosophy follows a pragmatic worldview. Pragmatism is described as choosing from multiple approaches to look for practical consequences to organize future observations and experiences while also being open to choose the method, technique, and procedures that meets the current need and purpose (Cherryholmes, 1992; Creswell, 2014). Pragmatists understand that "truth" is relative and recognize that research occurs in a variety of contexts. Pragmatism "opens the door to multiple methods, different worldviews, and

different assumptions, as well as different forms of data collection and analysis" (Creswell, 2014, p.11). The pragmatic paradigm focuses on the research question, rather than the particular methods, allowing the researcher to select methods that best answer the question (Creswell & Plano Clark, 2011; Tashakkori & Teddlie, 2003). It is a practical approach oriented toward "what works" for the best result (Creswell & Plano Clark, 2011).

Arising from this pragmatic worldview, the students presented multiple perspectives (Creswell & Plano Clark, 2011) by responding to three sections of the survey corresponding to different viewpoints of support services. The research approach that I used in this study was a convergent parallel method collecting both qualitative and quantitative data at the same time to provide a comprehensive analysis of the research problem (Creswell, 2014). This method allowed efficient data collection through only one contact with busy students. My study drew upon theoretical frameworks described in chapter 2 in developing comprehensive services, student development, and mattering, a social science theory.

Research Design

Using Creswell's (2014) convergent parallel mixed methods research design model for a multiple methods approach allowed for the integration of quantitative and qualitative data, merging them to interpret findings. Both quantitative and qualitative data provided different types of data that illustrated a view of the online student experience with services at the University of New Mexico (UNM) from different perspectives. The quantitative analysis provided insight into the relationship between the utilization of services and online students' feelings of mattering. The qualitative analysis provided details revealing insight into the quality of the interactions. This study examined the online student perspective by using a three-part survey. The first section of the survey was a comprehensive list of services for

online students asking which services students have used. The second section was a 15-question mattering component to ascertain if students feel they matter to the institution. The third section of the survey was qualitative open-ended questions to elicit details of the online student's best and worst service experiences, and their definitions what it means to matter to people at UNM.

The convergent design "occurs when the researcher collects and analyzes both quantitative and qualitative data during the same phase of the research process and then merges the two sets of results into an overall interpretation" (Creswell & Plano Clark, 2011, p. 77). The convergent parallel design provided a more thorough view of the students' perspective, allowed for easily collecting diverse types of data, and saved time for the participants. A multiple methods approach using quantitative and qualitative data allowed for corroborating the findings (Creswell, 2014; Russ-Eft & Preskill, 2001) and provided a more comprehensive view of the online student experience with services.

The original intent of my study was to determine if a relationship between the use services and students' feelings of matter exists by performing a linear regression analysis to predict the use of services on students' feelings of mattering. However, due to the low number of respondents, fewer than 10 respondents per variable, and the volume of variables within my study, it was determined that a correlation analysis within a single case study of the University of New Mexico was more appropriate. This change aligned with my pragmatic worldview of research because the correlation analysis could be used with the number of respondents and could help to determine the relationship among the variables (Creswell & Plano Clark, 2011). The correlation analysis helped me to answer my research question. In

this case, the best result was one that allowed the interpretation of useable, meaningful results given the number of factors in the study.

A case study is an in-depth description and analysis of a system, bounded by time and activity (Merriam, 2009; Stake, 1995; Yin, 2009). By examining one institution (UNM) and one type of participant and enrollment status (online students enrolled exclusively in online classes) and enrollments during one particular timeframe (Fall 2015 to Summer 2016), as illustrated in Table 3 my study was bound by time, place, and activity. Further, my study also is characterized by being particularistic, descriptive and heuristic (Merriam, 2009). It was particularistic, focusing specifically on one view of the service experience through the lens of online learners. The results and expression of them provided a description of the service experience of these particular students. The study was heuristic because it brought about new understanding of the services for online students at UNM and students' experiences with those services. This single case study analysis provided a concrete perspective of these services, providing a particular context to examine my research questions.

Table 3:

UNM Case Study - Bounded System

Institutions Involved	UNM
No. in Institutions Involved	1
Participants	Online Students
Enrollment Status	Enrolled exclusively in online classes
Timeframe of Enrollment	Fall 2015 through Summer 2016

The correlation analysis was used to describe the measure of association between the variables and to determine if that association was statistically significant. The Spearman rho, or Spearman r, correlation coefficient was designed to be used with ordinal scales; Spearman

rho converts observed scores into ranks from lowest to highest, assuming that highly correlated variables will have the same or similar rank order (Runyon, Coleman & Pittenger, 2000). Spearman's rho was used to determine if statistically significant correlations existed between a) services to services, and b) services and students' feelings of mattering. I also used ANOVA analysis to determine whether or not statistically significant differences existed between feelings of mattering for gender and ethnicity groups. ANOVA is an appropriate type of analysis for use when examining the relationship with a nominal independent variable and a continuous dependent variable. Post hoc testing was used to determine if specific groups had statistically significant differences between them.

Research questions. The purpose of this study was to examine the relationship of support services on students' feelings of mattering for distance education students in higher education. The study was designed to elicit the student perspective by surveying students who took online classes exclusively in the academic year 2015-2016. A convergent parallel approach was used to understand the relationship of the use of services and students' feelings of mattering. I used the WICHE Cooperative for Educational Telecommunications (WCET) (Shea & Armitage, 2002) framework which provided a comprehensive list of services recommended for distance education students. The services in this list were the independent variables (IV). France (2011) provided a questionnaire for universities to assess students' feelings of mattering, the dependent variable (DV). I hypothesized that students' feelings of mattering increase as they utilize and value institutional support resources. Additionally, open-ended questions were directed at eliciting more detail from the students regarding their service experiences. Thus, the guiding question of this research were:

What is the relationship of student support services with students' sense of mattering for online students attending UNM?

The sub-questions of this research were:

- What support services do distance education students utilize and why?
- What is the relationship between students' feelings of mattering and their use of support services?
- How did the students' interactions with services impact their sense of mattering to the institution?

Table 4 illustrates the research design highlighting how each of the research questions were addressed through data collection and analysis. For each research sub-question, the data collection instrument, source of the instrument, data source and type of data are listed. Additionally, for the quantitative analysis, the services for online students were the independent variable (IV) while mattering was the dependent variable (DV).

Table 4:

Research Design

Research Sub-Questions	Data Collection Instrument	Source of Instrument	Source of Data	Variables	Type of Data
1. What support services do distance education students utilize and why?	Survey – Services Table	WCET Spider Web of Services (Shea & Armitage, 2002) & online.unm.edu	Students	IV	Quantitative

Research Sub-Questions	Data Collection Instrument	Source of Instrument	Source of Data	Variables	Type of Data
2. What is the relationship between students' feelings of mattering and their use of support services?	Survey – Services Table; UMUM – 15	France (2011)	Students	IV DV	Quantitative
3. How did the students' interactions with services impact their sense of mattering to the institution?	Survey – Probing Questions	Researcher developed	Students	n/a	Qualitative

Data collection and sampling. Data were collected through a survey instrument directed at students enrolled exclusively in online classes at the University of New Mexico (UNM) during the academic year beginning Fall 2015 and ending Summer 2016.

Instrumentation. Data was obtained from a survey (See Appendix A). The survey was directed to all students enrolled exclusively in online courses in the academic year beginning Fall 2015 and ending with Summer 2016 at main and health science center campuses at the University of New Mexico. The student survey consisted of three parts: 1) a comprehensive table of services; 2) a 15 question Unified Measure of University Mattering

instrument (UMUM-15); and, 3) qualitative questions regarding the students' experience of their service interactions. The survey was piloted for usability, but those data were not included in the data analysis. Feedback from the pilot prompted me to add the capability of hovering over the services to see examples of the UNM offices represented under these service names in order to clarify what was meant. I also clarified and simplified the language in the instructions. Other feedback included comments about the length of the survey due to so many services and some of the mattering questions being "weird". I did not alter the UMUM-15 because it is a validated instrument. I also decided to ask one general question about the format through which students accessed services and the reasons they did not use services instead of asking those questions at the end of each section.

The first section of the survey consisted of a comprehensive list of services for online students. The list was developed using the WICHE Cooperative for Educational Telecommunications (WCET) (Shea & Armitage, 2002) "spider web" of services framework shown in Figure 4. The spider web of services was a result of the consensus process of the project's partners and "may not fit all campuses, but it provides a frame of reference from which to proceed" (Shea, 2005, p.16). For purposes of this study, the WCET spider web of services was converted to a table format reflecting relevant services offered through UNM websites and online.unm.edu specifically for online students. I removed staff-to-faculty and faculty-to-staff communications since those are not student services. I also removed developmental education services because, at UNM, students register for developmental classes, not a service, and disability services, tutoring, and advising services covered other aspects that fell under developmental education services. As students proceeded through the survey, they selected whether or not they used a particular service at UNM. Students were

instructed to hover their mouse over the name of the service to see descriptions of each service to aid clarification. If the student had used the service, they were asked the format through which they accessed the service, through online means, the telephone, or a face-to-face interaction. Using a 6-point Likert scale, shown in Table 5, students were also asked to respond to the statement "These services were useful to me." Services are those that were offered to online students through the UNM websites and online.unm.edu specifically for online students.

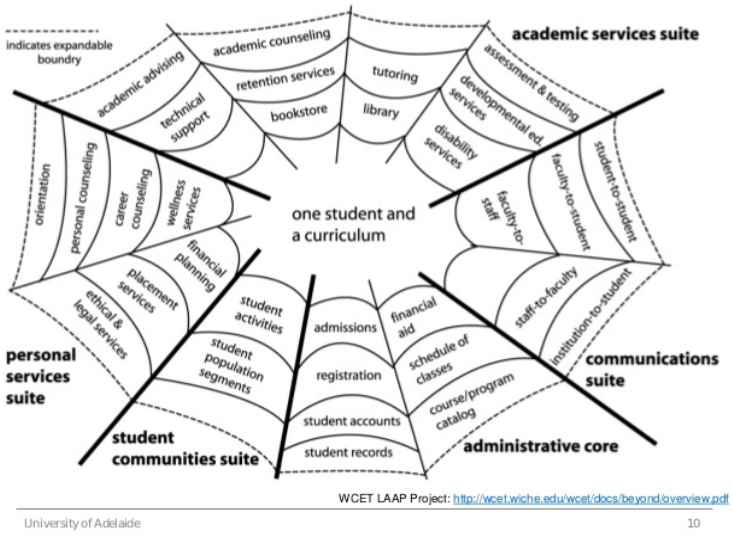

Figure 4: WCET's "spider web" of services.

Table 5*:*

Services Likert Scale

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use

The online.unm.edu website supports functions within the UNM's "Extended Learning" department and is a resource for online students. The staff provide academic technology and instructional support related to online course delivery and offer an integrated array of services designed to meet the diverse technical, administrative, and academic technology needs of students and faculty. The website has its own content but also embeds links to many other resources across campus, in effect creating a type of "one-stop shop" experience for online students.

Though a website analysis was beyond the scope of this study, it is important to understand the fundamentals of UNM website information architecture as it relates to online.unm.edu, the funnel of services for online students at UNM. A first generation website is defined the "institutional view or brochure stage" where information is presented, such as what is found in a brochure (Burnett & Oblinger, 2002, p. 91). The links are often presented in a way that mirrors the institutional organization chart, presenting resources from the institutional perspective rather than the customer perspective, with the user frequently navigating into other departmental websites with a different look and feel. This presentation can be helpful as it brings together disparate website information in one place making it easier for the students to find what they need. A second generation website is transactional, more interactive, and presents a customer view (Burnett & Oblinger, 2002) because the user is able to actually perform tasks such as submitting an application. UNM's websites offer a blend of both types of website usage.

The second section of the student survey was a condensed mattering instrument, developed from the dissertation research of Megan France, the Unified Measure of University Mattering (UMUM-15) mattering instrument (Appendix A). Measuring university

mattering is important because it "is necessary for evaluating the effectiveness of university programs that claim to increase feelings of mattering and for identifying students with low feelings of mattering" (France, 2011, p. 5). Feelings of mattering for college are distinctive from generalized feelings of mattering. I wanted to find a tested and validated mattering instrument that targeted mattering in a university context. Though several instruments have been developed to measure mattering for college students, each of them were problematic.

Schlossberg, Lassalle, and Golec (1989) developed the *Mattering Scale for Adult Students in Higher Education* (MHE), which mapped to five subscales of mattering but did not provide factor analytic evidence to support these subscales. Tovar, Simon, and Lee (2009) developed the College Mattering Inventory (CMI). Using two methods of factor analysis, they identified six subscales. However, neither the MHE nor the CMI mapped to Rosenberg and McCullough's (1981) theory of mattering, the basis of Schlossberg's (1989) theory and definition.

Elliot, Kao and Grant (2004) constructed and validated a 24-item mattering index that mapped to Rosenberg and McCullough's (1981) theory of mattering. The index was determined to be a strong and effective measure of mattering. The index was tested using a three-factor model with awareness, importance, and reliance but not ego-extension. Based on Elliot, et al.'s (2004) work, France and Finney (2009) tested a four-factor model, which included ego-extension as a mattering construct, and compared it to Elliot, et al.'s (2004) three-factor model. They found the four-factor model fit significantly better than other models. This is important for my study as it established the four constructs from Rosenberg and McCullough's (1981) theory of mattering: awareness, importance, reliance, and ego-extension.

France, Finney, & Swerdzewski (2010) further studied the construct validity of mattering and, building from Elliot, et al.'s (2004) work, developed the University Mattering Scale (UMS) affirming its measurement of the constructs. They also determined that the model could be impacted by some of the questions on the UMS being worded negatively. Thus, France (2011) revised the UMS by changing the wording and adding new items to more clearly measure the constructs, resulting in the Revised University Mattering Scale (RUMS). France (2011) further tested the RUMS for construct validity and model fit. Based on the analysis, she further refined the wording and redundancy, whittling the instrument to fifteen questions. The outcome of the revisions produced a one-factor measure, utilizing only fifteen questions, UMUM-15, which "covers the breadth of the university mattering construct by retaining items from each facet of mattering" (p. 86). Each of the questions of the UMUM-15 maps to one of the four constructs used in the development of the instrument (Appendix B). The UMUM-15 is designed for use in universities to determine students' feelings of mattering to the institution. Having only fifteen questions also helped to keep the student survey as short as possible. Therefore, the UMUM-15 was the tool that I selected to measure distance education students' feelings of mattering in my study. Students were asked to respond to each of the 15-questions using a 6-point Likert scale shown in Table 6.

Table 6:

UMUM-15 Likert Scale

1	2	3	4	5	6
Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree

The third section of the student survey included three open ended probing questions (see Appendix A) to explore the online student experience through the use of support services at UNM. The first two questions asked students to describe their best and worst experiences with services at UNM. The third asked them to describe how they know they matter to people who work at UNM. These three questions form the qualitative portion of my study. I used this qualitative approach to explore an issue for a specific population and to gain complex, detailed understanding of the issue (Creswell, 2007). The assumption in a convergent parallel design is to mirror the same concepts in both the quantitative and qualitative data collection method (Creswell, 2014).

Sample. The survey used census sampling targeting students enrolled exclusively in online courses at UNM in any semester of the academic year starting Fall 2015 and ending Summer 2016. This was a purposeful approach in that I intentionally selected participants (Creswell, 2011) not only in online classes, but also exclusively in online classes to help minimize services student's might see if they were also taking face-to-face classes. The survey invitation was emailed to students enrolled exclusively in online courses in the academic year of 2015-2016: fall, spring, and summer semesters. The one-year span was intended to provide a solid sample with a greater chance of obtaining active email accounts as well as students with relatively recent service experiences. The survey was in an electronic format using Opinio, a software tool administered by the university's information technology (IT) department. The total number of student participants was likely to be less than 2000 from any given semester. Survey invitations were sent within one week of the email addresses received and loaded into Opinio. Two reminders were sent before closing the survey in order to prompt a larger response rate.

Demographics. The university maintains a student database that contains records for each student. These records contain email address, demographics, and enrollment data. Demographics serve as a control in describing the sample population. Along with email addresses, I requested demographics: major, college, year in school (at the time the course was taken), gender, ethnicity, and age (at the time of the survey). The purpose of collecting these data via archived records, instead of through the survey, was to ensure accuracy and minimize the length of the survey.

Setting. The study surveyed students from UNM who were enrolled exclusively in online classes at main and health science campuses for the academic year 2015-2016. UNM's total number of students for all campuses was 27,353 students. Students frequently opt for a combination of face-to-face, online classes, and "hybrid" classes that use elements of both types of formats. Published information on enrollments at UNM do not differentiate between the types of formats for instruction that students choose. However, roughly 1700 students per semester enroll exclusively in online classes, taking no other types of classes, and these were the students that were invited to participate in my study.

Human subjects' protection. My study involved students and was governed by ethical practices that were approved through the institutional review board at UNM. This study did not target vulnerable populations. No provisions were planned for cognitively impaired adults or adults unable to consent. This study presented minimal risk to participants.

Age. Students under the age 18 were not recruited for the study. Age is part of the demographic data and students under the age of 18 at the time of the survey were not recruited.

Language. The survey was in English. No provisions were planned for using non-English languages. English is used for instruction in the university's online courses and all the participants are part of the instructional process.

Anonymity and confidentiality. The student data file with the email addresses and associated demographic data was obtained through UNM's Extended Learning department. The data files were transmitted from Extended Learning to IT. IT loaded the data files into the Opinio survey software where IT set up the software to restrict my access, making the identifiers unavailable to me. Once I was alerted that the data were loaded and ready, I released the survey recruitment email. Access to personal identifiers was restricted to the Opinio administrator within IT. IT generated the reports for me to further ensure that I could not access personalized data. The data in these reports were not associated with any personal identifiers, keeping the data anonymous and confidential. My analysis was conducted using aggregated individual cases.

Consent and withdrawal. The email invitation contained a greeting, the purpose of the study, and web link (Appendix C). Clicking on the link initiated a prompt for secure authentication. The landing page of the survey contained the consent information. Students' voluntarily activated the survey by clicking to agree to the consent. Participants could withdraw at any time by exiting the survey at any point.

Data management plan. Data files with identifiers were used between the Extended Learning and IT offices in order to associate files and to email the survey link to survey participants. These were transmitted via a secured and encrypted file transfer protocol. This file was stored on the secured Opinio server. The server is hosted by UNM IT and maintained under IT data management practices secured through established IT security

protocols which include firewalls, encryption, and monitoring. Data reports that I viewed and downloaded did not have personal student identifiers associated with the demographic data or the survey responses.

Benefits to participants. No payments were issued for participation in the survey. Students did not see direct benefits by participating in the study. The participants' benefit was indirect in contributing to current understanding of online students' service needs and how interactions with these services might impact students' feelings of mattering.

Data Analysis

Enrollment data provided a demographic view of the student population enrolled in online courses and were used to provide descriptive analysis of the online student population at UNM. Quantitative and qualitative data, collected together in the online student survey, were analyzed separately and then merged to show how the data converged or diverged (Creswell, 2014).

Quantitative analysis. The comprehensive scope of services and the mattering questionnaire, UMUM-15, were analyzed using descriptive statistics to describe the data. I also used SPSS for Spearman's rho correlation analysis and ANOVA to explain the relationship between the dependent and independent variables. Spearman's rho nonparametric tests were used to determine if statistically significant correlations existed: a) between the services themselves, and b) between services used and students' feelings of mattering. I used ANOVA analysis to determine whether or not statistically significant differences existed between feelings of mattering for gender and ethnicity groups. I tested the relationship because the literature shows that there is often a relationship between gender and ethnicity and other measures (Bradford & Wyatt, 2010).

These analyses were used in responding to the research hypothesis. Survey variables for the list of services and the mattering instrument were identified in the SPSS codebook (see Appendix D). Additionally, both the services and the mattering responses required treatment before running the analysis in SPSS. In the services section, the "7 = did not use" responses were recoded to zero and set as a missing value. In the UMUM-15 section, questions #4 and #9 were negatively worded and were recoded into new variables to align with the structure of the other 13 questions.

Correlation analysis. This study investigated the degree of association between online students' use of services and their feelings of mattering. My hypothesis was that a positive correlation exists between distance education students' use of supporting services and their feelings of mattering to UNM.

RQ: Do support services correlate with students' feelings of mattering?

H_o: Support services has no association with students' feelings of mattering. In other words, as a result of online students utilizing support services, there will be no significant difference in students' feelings' of mattering to UNM.

H_a: Support services correlate with students' feelings of mattering.

To examine the research question, a correlation analysis was conducted to investigate whether or not support services is associated with students' feelings of mattering. The Spearman rho correlation is a non-parametric test that measures the degree of association between two variables. Spearman rank correlation test does not make any assumptions about the distribution of the data and is the appropriate correlation analysis when the variables are measured on a scale that is at least ordinal (Fraenkel & Wallen, 2009). The closer r_s is to zero, the weaker the association between the ranks. In this case, the independent variables

(IV) were services and the dependent variable (DV) was the students' feelings of mattering. *R* was reported and used to determine the strength of the association between the variables. Statistical significance was used to determine whether to reject or fail to reject the null hypothesis at the level of $\alpha < 0.05$. With $\alpha < 0.05$, achieving a statistically significant Spearman rank-order correlation means that there is less than a 5% chance that the strength of the relationship, the r_s, happened by chance if the null hypothesis were true.

Demographics are important variables to help explain observed results (Spector & Brannick, 2011). Demographic data were analyzed to determine differences in statistical significance differences in the groups. The demographics included student major, college, year in school (at the time the course was taken), gender, ethnicity, and age (at the time of the survey).

Validity and reliability. The UMUM-15 instrument has been tested for construct validity and reliability (France, 2011). As previously outlined, the UMUM-15 derived from previous longer versions of tests designed to measure university mattering and evaluated for construct validity using different modeling analyses to determine the best model fit. The resulting instrument was the 15-item, one-factor measure that I used in my study, the UMUM-15. I conducted a reliability analysis to check the model's fit. The overall Cronbach's alpha was .929, showing a high level of internal consistency. The Cronbach's alpha was above .900 for all 15 correlations of the mattering questions. This analysis confirmed the scale reliability of the instrument and because it was reliable I used the mean of the 15 measures to create a single mean measure of mattering.

The internal threats to validity of history and maturation were addressed by selecting online students from the most recent academic year, Fall 2015 through Summer 2016. The

selection was addressed by using a census sample. Based on past semesters, the census sample could have been about 1700 students per semester. Within that sample, a full range of student characteristics were equally distributed.

External threats of interactions of treatment and selection, setting, and history were mitigated through census sampling, inviting all students enrolled exclusively in online courses for the 2015-2016 academic year to participate in the study. The invitations were emailed and students participated in the survey online, using similar tools and techniques through which they receive academic instruction.

In a convergent approach, unequal sample size between the quantitative and qualitative data is a threat to validity (Creswell, 2014). This threat was minimized in this study by capturing both quantitative and qualitative data in the same survey, though 39% of students did not complete all three portions of the survey. Additionally, the qualitative questions aligned with use of services and students' experience with the services, which aligned with concepts represented in the quantitative instruments.

To ensure the best survey completion rate possible, I limited the survey design, targeted the audience, considered the contact information, and sent reminders to participate. The survey was kept to a length that obtained the necessary data but was as short as possible. The survey length was minimized by obtaining demographic information through the university enrollment data and not asked in the survey. The UMUM-15 mattering instrument was selected because of its purpose and because it is only fifteen questions long and was validated through prior research. The qualitative questions were also limited to three. Students enrolled in the academic year 2015-2016 were more likely to have active email addresses in the UNM systems and are therefore more likely to receive the email invitations.

Additionally, since their experience at UNM and with services was relatively recent, I hoped they would be more inclined to participate in the survey. Two reminders to take the survey were sent within two weeks of the first email invitation.

Delimitations and limitations.

Delimitations. This was a single case study occurring in one place with one university. Faculty, staff, and administrator roles are vital to the function of providing support services; however, the perspectives of these groups were not the focus of this study. Data were collected from the student perspective only, from students enrolled exclusively at UNM in online courses, not taking face-to-face or hybrid classes (curricula including face-to-face and online courses) or Massive Open Online Courses (MOOC's). Technology tools used for instruction or in providing support services were not evaluated in this study. Email invitations were sent to students enrolled for the academic year beginning Fall 2015 to Summer 2016 and exclusively in online courses. Students under age 18 were not recruited for the study.

Limitations. Students who dropped classes or withdrew from the university may not have received the invitation or have an active email address in the UNM student system. These students likely did not participate in the study and their experiences likely were not captured. The absence of the departed students' voice is a limitation because their use of services, the helpfulness of the services, and their feelings of mattering to UNM may have been different than students who persisted which in turn may impact the overall results of the study.

The number of participants for this study and was a limitation. Only 186 students responded from the over 4,000 email invitations that were sent. More student responses

might have impacted the services-to-services correlations and the services-to-mattering correlations.

Because this is a single case study designed to develop deep understanding of online students' use of services and their feelings of mattering at UNM, the results may not be generalizable.

I grouped and labeled services using the WCET "spider web" framework (Shea & Armitage, 2002). The grouping and labeling of services are a limitation because these labels may be confusing for students. I tried mitigating confusion by adding functionality whereby hovering the computer mouse over the labels prompted UNM examples of the services to show. However, students may still have been confused about what services they were rating versus which were asked about.

Even though I kept the survey as short as possible while still allowing me to collect the data I needed, the length of survey may have prompted some student to abandon before completion.

I consulted with subject matter experts at UNM's main and north campus health sciences center to better understand the scope and possible differences between campuses. I also consulted with the north campus health sciences center expert to better understand the resulting correlations between the use of services and feelings of mattering. However, due to my own time constraints I did not do a thorough review with both subject matter experts with the results to gain further insights. This lack of consultation was a limitation to my study.

Qualitative analysis. The qualitative analysis process was emergent from responses to the three qualitative questions in the survey design. Qualitative data was analyzed using coding processes, done manually. The initial process was an open coding process (Merriam,

2009; Russ-Eft & Preskill, 2001) to analyze the data for relevance to the study. This was followed by an axial coding process (Merriam, 2009; Russ-Eft & Preskill, 2001) to group the categories, relate them to each other, and refine them. Using Merriam's (2009) guidelines, the categories in the qualitative data analysis met the following criteria:

- Be responsive to the purpose of the research
- Be exhaustive
- Be mutually exclusive
- Be sensitizing (to what is reflected in the data)
- Be conceptually congruent

The final question of the survey explained that more information might be needed and asked students if they would be interested in a follow up interview. If they selected yes, the reply triggered a secondary survey in which students could supply their contact information. After a review of the qualitative responses, I determined that I had sufficient qualitative data and did not need to seek follow up interviews.

Following Creswell's (2014) steps for qualitative data analysis, these are the steps I took to analyze my data:

Step 1: Organization and preparation for analysis included downloading the survey responses from Opinio, putting them in Excel, and culling out records in which responses to all qualitative questions were missing, this left 114 participants for the qualitative analysis. I also went through all responses to question 1, and so on, to cull out responses left blank.

Step 2: I read through all the responses to get a general sense of the data and making notes of my general impressions.

Step 3: Initial review of the data revealed many responses related to instructors, instructional strategies, or about course availability. During this step, I coded responses as to whether they were support service-related or instructor/instruction-related. When in doubt, I used the context of the other two responses to determine the coding and when still in doubt, I opted to use the support service code. I also coded the "mattering to UNM" responses as positive or negative. This step helped me to understand the general scope of the data.

Step 4: Next, I separated responses by question 1, 2 and 3 to review each group of responses in context to the question asked. I coded each response with a word or phrase that summarized the comment, memoing thoughts that came to mind during the review.

Step 5: I reread all of the responses several times, again considering the overall tenor and themes. For each response, I considered if the word or phrase still captured the essence of the response or if a different word or phrase was a better fit. I then grouped the responses based on similar concepts and coded those.

Step 6: I re-merged the responses again and analyzed question 3 "Describe how you know you matter to people who work at the University" together within the context of responses to the other two questions. I reviewed the codes to see if they still represented the students' expression and changed a few of them.

Step 7: I analyzed the quantitative and qualitative themes together to examine for commonalities and differences thus identifying four overarching themes.

Positionality. Nineteen years as a staff member in various roles at UNM along with years as a student pursuing two graduate degrees and teaching online classes, provided me with unique insider perspective of UNM functions. In those nineteen years, I have worked in, and with, many departments at UNM. Through my experiences I have developed in-depth

formal and tacit knowledge of the services at UNM and how they work. It is my passion to provide quality services to students, to enhance their feelings of mattering, and to facilitate success in their academic pursuits.

I am aware of many of the obstacles students face and have focused my career on activities to improve the student experience. I believe that cumbersome processes can hinder access and create so much hassle that some students will give up rather than figure out a way through it. I have spoken with many students and their families about the obstacles or confusing information and have tried to simplify processes and clarify information. Many students, parents, counselors, faculty, and staff have complained about poor service and processes. It is particularly disconcerting when students complain because they have the least power and knowledge to fix it. Whether the student was upset or not, I would do what I could to help them. Sometimes the only help I could offer was to call ahead to the department that could fix the student's issue, then walk the student over, literally handing them and their issue over to the person who could answer their question or make their issue right. I often received gifts – flowers, candy, cards, even a handwoven bag – thanking me for helping them. My experiences serve as confirmation that service matters, how we treat people matters. In each interaction with students we are ambassadors for the institution. In those moments we "are" the institution.

My experience and passion for quality student services led me to develop the research question. Since the primary instrument of data collection and analysis is the researcher, the case study is impacted by the researcher (Merriam, 2009). I am aware that I have biases and may not maintain clear objectivity towards the outcome of this study. However, it is also important to me, as a professional in higher education, that sound decisions are made

regarding planning for student support and for how institutional resources are effectively used. I controlled for my bias by maintaining awareness of my attitudes and desire for quality results. However, I did not do a thorough review of the results with subject matter experts from either campus. The multiple methods research design was another way that I controlled for bias in the data analysis. The quantitative and qualitative analysis supported each other to present a picture of the online student service experience at UNM.

Converging the analyses. The primary assumption of a convergent parallel multiple methods design is that "both qualitative and quantitative data provide different types of information – often detailed views of participants qualitatively and scores on instruments quantitatively – and together they yield results that should be the same" (Creswell, 2014, p. 219). I followed the convergent parallel research design process outlined by Creswell (2014) in which quantitative and qualitative methods were collected and initially analyzed separately. Both sets were brought back together, or converged, by using a side-by-side comparison approach. This approach entailed reporting the quantitative statistical results then discussing the qualitative findings that may or may not support the statistical results, an approach also outlined by Creswell (2014).

Summary

My study examined the relationship of online students' use of support services and their feelings of mattering. This relationship was analyzed through the use of a comprehensive array of services and an instrument designed to measure college students' feelings of mattering to the institution. Students were asked to provide examples of their service interactions which helped me to provide a description of their experiences with

services. Together, these data provided the online student perspective of whether support services contribute positively to their overall student experience.

Chapter 4: Findings

Introduction

This chapter reflects the findings from data collected to examine the relationship between online students' use of support services and students' feelings of mattering to the institution. The multiple methods analysis of quantitative and qualitative survey responses was drawn from students enrolled exclusively in online classes at the University of New Mexico (UNM) for the academic year 2015-2016: Fall 2015, Spring 2016, and Summer 2016. Quantitative data responses to a 3-part survey were used as descriptive statistics and for correlation analysis while open-ended responses were used for qualitative analysis. Both sets of data were analyzed separately then converged to form a description of the service experience of online students at UNM. The quantitative analysis included the use of services, student's feelings of mattering to UNM, and the correlations between services and mattering. The qualitative analysis included students' stories of their best and worst service experiences as well as a description of how students know they matter to people who work at UNM.

Four overarching themes emerged from this study and will be discussed in detail throughout this chapter. Students responded to the survey from a *holistic* viewpoint, not distinguishing between support services and instructional services. Even though the instructions and questions on the survey pointed specifically to support services, nearly half of the students' responses specifically referenced instructors and instructional strategies. My study focused on services and not instruction or the role of the instructor. However, nearly half of all the qualitative responses referred to instruction-based services without differentiating them from support-based services. *Technology support and access* was another theme that emerged. For students enrolled exclusively in online classes, technology

had a critical role as the vehicle for their academic pursuits. Online students expressed the value of *personal touch* in their interactions with staff and a desire for a sense of *community and connection*.

UNM Service Environment

UNM is New Mexico's flagship institution in Albuquerque, NM, in existence since 1889. It is a 4-year public research institution with medical and law schools and four branch campuses. Overall enrollment for the academic year 2015-2016 across all campuses was 27,353 students (College Factual, 2016). Students enroll in a face-to-face, online classes, or "hybrid" classes which use elements of both types of formats. Published enrollment reports at UNM do not differentiate between the types of formats for instruction that students choose. However, UNM's Extended Learning department, which offers academic technology and instructional support for online course delivery, reports that roughly 1700 students per semester from its main and health science campuses enroll exclusively in online classes.

UNM has a vast distributed network of support services across each of its campuses. The Extended Learning department bridges these campuses and the various departments through the website online.unm.edu. While Extended Learning does provide some aspects of technical support to students and instructional support for faculty, it does not provide direct service for the vast array of services. Instead, online.unm.edu contains embedded links to many resources across campus to assist students in finding the service they may need. The distributed services model means that although they operate under the institutional policies and practices of UNM, many departments throughout the campuses offer specialized services, each with their own staff, training, processes, procedures, and policies reporting through various lines of the UNM organizational structure. Some academic departments

monitor their students' progress and reach out to the student. Some departments communicate deadlines and other important information through social media and email. However, in most cases, students must seek out the service, which means they need to know what departments to contact for what purpose and how to reach them.

At UNM, all departments have their own website which can be helpful, but it can also be frustrating for students and others to find what they seek. In essence, the website experience mirrors the distributed organization of services on campus. Some of the websites provide embedded links for other sites within UNM. Over the years, there have been attempts to consolidate and pull together associated links to ease navigation, but many of these consolidation websites did not withstand changes in leadership, funding. or other circumstances. Online.unm.edu, the website designed for UNM's online students, is one of these types of consolidation websites that has weathered many changes at UNM. Online.unm.edu cannot provide links to every service provider at UNM and remain an effective website because there are just too many links for offices across UNM.

UNM uses at least two learning management systems (LMS) between its main and health sciences campuses that are interfaced with UNM's enterprise-wide administrative systems. The LMS are used for online course management. Besides being a repository for instructional content, they can provide a rich environment with interactive features that enhance the online instructional experience. Extended Learning is the office that administers and supports UNM's primary LMS and online.unm.edu. The north campus health science center supports another major LMS used for some classes.

Participants

Email invitations were sent to 4,276 students enrolled exclusively in online classes Fall 2015, Spring 2016 and Summer 2016. Two follow-up reminder emails were emailed spanning two weeks of data collection. The raw data file contained 221 responses, N=221, meaning that 221 participants clicked the link to begin the survey. Prior to analysis, 34 records were removed due to participant abandonment prior to responding to any questions. These students clicked the link, and their associated demographics were collected, but the students did not follow through on answering the questions; thus, the records were deleted. Another record was deleted due to responses of all "1's" in both the services and mattering sections indicating lack of attention to the actual survey questions, leaving 186 responses to analyze. The 186 participants resulted in a 4% response rate. To perform the correlation between services and mattering, I used responses when participants responded to half or more of the questions related to mattering. Null values were marked as missing. To do the correlation analysis between services (IV) and mattering (DV), the correlation was based on the N of mattering since not as many participants completed the mattering section. Two of the mattering questions, numbers 4 and 9, were worded negatively on the instrument. These responses were recoded so that responses 1=6, 2=5, 3=4, 4=3, 5=2, and 6=1. I used all 114 responses completed for the qualitative section.

Table 7 illustrates the N for the various subsets of data from this base of 186 responses, depending on the analysis I was performing. The N for the qualitative portion was 114, though fewer answered each question. Interestingly, more students responded to the question asked to describe their best service experience, which I viewed as an indicator that students like to share their positive stories and may not be as comfortable or willing to share

negative stories. Students may not trust the anonymity of the survey and may not want negative stories "publicized". It is also possible that students had more positive than negative stories to share but it is also possible that students at UNM are more polite or nice and prefer to focus on the positive aspects of their service experience. Question 1 regarding the students' "worst" service experience had 90 responses while question 2, about their "best" experience, had 102. The final question regarding how they know they matter to UNM had a total of 93 responses. The total N of 114 for the section derives from the overall total responses because 114 students responded to these questions but not all 114 students answered all three questions.

Table 7:

Dataset and Sample Size for Analyses

Dataset	N
Invitations sent	4276
Raw Data	221
Use of Services	186
Mattering	158
Services with Mattering	158
Qualitative – "Worst" Experience	90 / 114
Qualitative – "Best" Experience	102 / 114
Qualitative – "Matter to UNM"	93 / 114

Demographics. Online classes are offered across a variety of majors and colleges. Some degree programs are offered entirely as online programs, some programs take a blended approach and offer some classes in the online format, and some programs are not offered online but students may opt to enroll in online classes to fulfill other degree

requirements. The demographics of each section reveal the diversity of students enrolled exclusively in online classes at UNM. UNM's overall enrollment for Fall of 2015 was 27,353 students. Though participants involved in my study represent less than 1% of UNM's overall enrollment for Fall of 2015, these demographics provide a cross-section of our online student population. The demographic information for this study included major, college, student classification, gender, ethnicity, and current age. Each demographic characteristic is reported by each of the three datasets: services; services and mattering; and, qualitative responses.

Major. Table 8 shows student enrollments in exclusively in online classes across 41 majors. The largest concentrations of students participating in the study are Business Administration, Elementary Education, Liberal Arts, Non-degree, Nursing, Organization, Information & Learning Sciences, and Psychology. It was not surprising that students enrolled exclusively in online classes represented this breadth of majors. UNM offers a wide range of online classes due to the fact that most, if not all, departments offer them.

Table 8:

Demographics: Majors

	Services		Services & Mattering		Qualitative	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Accounting	3	1.6	3	2	1	0.9
Anthropology	2	1.1	2	1.3	1	0.9
Athletic Training	1	0.5	1	0.7	0	0
Biochemistry	1	0.5	1	0.7	1	0.9
Biology	2	1.1	2	2	0	0
Business Administration	32	17.2	29	19.2	24	21
Chemical Engineering	1	0.5	1	0.7	1	0.9
Communication	8	4.3	7	4.6	7	6.1
Criminology	4	2.2	4	2.6	3	2.6
Dental Hygiene	1	0.5	0	0	0	0
Early Childhood Multicultural Education	1	0.5	1	0.7	1	0.9
Economics	3	1.6	2	1.3	2	1.8
Educational Leadership	8	4.3	6	4	5	4.4
Electrical Engineering	1	0.5	0	0	1	0.9
Elementary Education	12	6.5	9	6	7	6.1
English Studies	2	1.1	2	1.3	2	1.8
Exercise Science	0	0	0	0	1	0.9
General Engineering	1	0.5	1	0.7	0	0
Geography	1	0.5	0	0	0	0
Health Administration	1	0.5	1	0.7	1	0.9
History	3	1.6	3	2	2	1.8
Integrative Studies	1	0.5	1	0.7	0	0
Latin American Studies	1	0.5	1	0.7	1	0.9
Liberal Arts	15	8.1	12	7.9	11	9.6
Mechanical Engineering	2	1.1	2	1.3	2	1.8
Nanoscience & Microsystems	1	0.5	0	0	0	0
Non-Degree	12	6.5	11	6.5	6	5.2
Nursing	11	5.9	9	6	6	5.2
Nursing Practice	2	1.1	1	0.7	1	0.9
Nutrition/Dietetics	3	1.6	3	2	1	0.9
Organization, Information & Learning Sciences	11	5.9	9	6	9	7.8
Political Science	1	0.5	1	0.7	0	0
Psychology	14	7.5	10	6.6	3	2.6
Public Administration	5	2.7	2	1.3	1	0.9
Radiologic Sciences	1	0.5	1	0.7	1	0.9
Religious Studies	2	1.1	1	0.7	1	0.9
Secondary Education	3	1.6	2	1.3	3	2.6
Sociology	5	2.7	4	2.6	2	1.8
Spanish	1	0.5	1	0.7	1	0.9
Speech & Hearing Sciences	1	0.5	1	0.7	1	0.9
Technology & Training	3	1.6	3	2	3	2.6
Undecided	3	1.6	1	0.7	1	0.9
Total	186	99.6	151	100.3	114	100.1

College. Participants were enrolled in 11 of 12 colleges across UNM's main and north campuses, as shown in Table 9. The colleges represented by the majors are the largest colleges at UNM. The largest concentrations of colleges represented by students align with the highest concentrations of majors that are also represented since the majors are within

college. Therefore, it was not surprising that most students who participated in the study were enrolled in the Anderson School of Management, Arts & Sciences, Graduate Programs, Non-degree, University College, and University Studies, which is also under the purview of University College. It is interesting to note that combining Non-degree, University College and University Studies represents over 40% of the students for each of the 3 datasets: services 42%, services & mattering 44% and qualitative 43%. Because these majors indicate student interest in a broad scope, interdisciplinary approach to selecting a major, these students are more likely to broaden their curricular choices.

Table 9:

Demographics: Colleges

	Services		Services & Mattering		Qualitative	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Anderson Schools of Management	24	12.9	21	13.9	19	16.7
College of Arts and Sciences	31	16.7	24	15.9	12	10.5
College of Education	1	0.5				
College of Nursing	6	3.2	5	3.3	3	2.6
Graduate Programs	40	21.9	28	18.5	26	22.8
Non-Degree Status	12	6.4	11	7.3	6	5.3
School of Engineering	3	1.6	3	2	2	1.8
University Libraries & Learning Sciences	3	1.6	3	2	3	2.6
University College	54	28.8	46	30.5	33	28.9
University Studies	12	6.4	10	6.6	10	8.8
Total	186	100	151	100	114	100

Classification. Nearly 40% of study participants were classified as seniors in their 4th year, while about 20% were classified as either juniors in their 3rd year or in their first year Master's program. This enrollment pattern is not surprising since upper division and graduate students have already experienced success and have learned to navigate various learning environments. The two participants in their first year, first semester as a freshman enrolled exclusively in online classes seems a more challenging way to start college since student

would less likely be familiar with college processes and demands. The online courses present a challenge because students must be more self-directed and able to work independently. Though with many students participating in dual credit programs in high school, many "first time freshman" are also experienced college students.

Table 10:

Analysis of services: Classification

	Services		Services & Mattering		Qualitative	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Freshman 1st Year 1st Semester	2	1.1	2	1.3	1	0.8
Graduate Certificate Programs	2	1.1	2	1.3	2	1.8
Graduate Doctoral	6	3.2	3	2	3	2.6
Graduate First Masters	36	19.9	27	17.9	22	19.2
Graduate Second Masters	2	1.1	1	0.7	2	1.8
Junior 3rd Year	38	20.4	31	20.5	25	21.9
Non Degree Graduate	12	6.5	11	7.3	6	5.3
Nursing Level IV	4	2.2	4	2.6	2	1.8
Senior 4th Year	75	40.1	61	40.4	45	39.5
Sophomore 2nd Year	9	4.8	9	6	6	5.3
Total	186	100.4	151	100	114	100

Age. Participants also vary widely in age, ranging from 19 to 69. I consolidated these ages into age groups of below 20, 20-29, 30-39, 40-49, 50-59, and over age 60, as represented in Table 11. From each of the datasets roughly 80% of participants were between the ages of 20 to 49. Eighteen percent of the participants were age 50 or older. One student was age 19 which is younger than expected for a student enrolled exclusively in online classes.

Table 11:

Demographics: Age Groups

	Services		Services & Mattering		Qualitative	
Age Group	Frequency	Percent	Frequency	Percent	Frequency	Percent
Below 20	1	1	1	0.7	0	0
20-29	55	30	41	27.2	29	25.4
30-39	48	26	39	25.8	29	25.4
40-49	47	25	43	28.3	33	29
50-59	25	13	18	12	15	13.2
Over 60	10	5	9	6	8	7
Total	186	100	151	100	114	100

Gender. The number of women participants outnumbered men more than 2 to 1, see Table 12. These percentages are higher than those represented in UNM's overall enrollment in 2015 in which women represented 55% of total enrollment. It did not surprise me that more women completed the survey than men since women are more likely to participate in surveys than men (Keusch, 2015; Smith, 2008), but I did believe that gender might have an impact on the results of the mattering section of the survey. However, an ANOVA analysis of $p = .391$ did not show statistical significance between gender and mattering for this study.

Table 12:

Demographics: Gender

	UNM Fall 2015	Services		Services & Mattering		Qualitative	
	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Female	55	128	69.4	104	68.9	80	70.2
Male	45	58	30.6	47	31.1	34	29.8
Total	100	186	100	151	100	114	100

Ethnicity. Almost half of the participants in my study were white, and a little over a third of the participants were Hispanic. This, too, follows survey participation patterns that

suggest whites are more likely to participate than non-whites (Curtin, Presser & Singer, 2000), see Table 13. Interestingly, 9.1% of participants were American Indian, nearly double the representation of students who identified as such for overall UNM Fall 2015 enrollment. Students appreciate the online learning experience because it provided flexibility and convenience. Distance education programs are a convenient option for students who want to earn a college education but live at a distance or have other time constraints (Guillory & Wolverton, 2008).

I did believe that ethnicity might have an impact on the results of the mattering section of the survey since there is often a relationship between gender and ethnicity and other measures (Bradford & Wyatt, 2010).

Table 13:

Demographics: Ethnicity

	UNM Fall 2015	Services		Services & Mattering		Qualitative	
	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
American Indian	5.2	17	9.1	12	8.6	13	8.6
Asian	3.5	6	3.2	5	3.6	5	3.3
Black or Afro American	2.3	4	2.2	2	1.4	4	2.6
Hispanic	41	60	32.3	41	29.5	48	31.8
Native Hawaiian	0.15	1	0.5	1	0.7	1	0.7
Race/Ethnicity Unknown	1.8	5	2.7	4	2.9	4	2.6
Two or More Races	3.2	7	3.8	6	4.3	6	4
White	37.8	86	46.2	68	48.9	70	46.4
Total		186	100	139	99.9	151	100

Use of Services

The WICHE Cooperative for Educational Technologies (WCET) “spider web” of services framework (Shea & Armitage, 2002) identified services under five categories:

academic services, communication services, administrative core, student communities, and personal services. See Appendix A for the full list of the services and their descriptions used in the survey. I used these service categorizations to examine the use and usefulness of each service. For each service, students were asked to indicate their use of the services and select a response to the statement: "These services were useful to me." Participants selected from a 6-point Likert scale, 1= "strongly disagree", 2= "disagree", 3= "disagree slightly", 4= "agree slightly", 5= "agree", 6= "strongly agree", and 7= "did not use". For the analysis of students' use of services, I used all responses if participants responded to half or more of the questions related to services. Missing values were treated as missing.

Service to service correlation. I expected to see some correlations between the services, hypothesizing that as students used services and find them useful, they found other services useful, too. For that reason, I examined the correlations to determine strength of the relationships between the variables using moderate (.40-.59), strong (.60-.79) to very strong (.8-1.00) values of the correlation coefficient with statistical significance at the $p < .05$ significance level (Evans, 1996). The moderate, strong, and very strong correlations are shown in each of the five categories of services based on the "spider web" framework and columns without moderate, strong, or very strong correlations were removed in order to highlight correlation scores. See Appendix E for the full listing of services, all correlation scores, and their related level of statistical significance.

Academic services. The academic services category of the "spider web" framework (Shea & Armitage, 2002) includes the services listed in Table 14 which also includes the ratings of how useful students found each service to be.

Table 15 shows the correlations of the academic services with all the other services highlighting moderate (.40-.59), strong (.60-.79) to very strong (.8-1.00) scores at the $p < .05$ significance level (Evans, 1996). Overall, the academic services correlated fairly highly with the other services and with each other, students used these services and also generally rated them highly on the scale of usefulness. The usefulness score ranged from 59% to 92% of students slightly agreeing, agreeing, and strongly agreeing with the usefulness of this cluster of services. Retention Services very strongly positively correlated with Tutoring ($R_s(28) = .811$, $p = .00$), Disability Services ($R_s(28) = .877$, $p = .00$), Assessment & Testing ($R_s(33) = .867$, $p = .00$), Placement Services ($R_s(17) = .831$, $p = .00$), Ethical & Legal Services ($R_s(17) = .912$, $p = .00$), Orientation ($R_s(19) = .921$, $p = .00$), Personal Counseling ($R_s(17) = .875$, $p = .00$), and Career Services ($R_s(16) = .868$, $p = .00$). This is a strikingly high number of very strong correlations but it had the lowest usage number of all the academic services, which may have had an impact on the scores. Not a lot of students used Retention Services and it is unclear what services students considered in their responses. The north campus health science center has an Office for Academic Resources & Support, main campus has the Center for Academic Program Support but these are focused on tutoring. Some department specific programs help with student retention but it was not generally implemented on either campus.

Students utilizing Retention Services can be expected to be referred to other types of support services in this cluster and beyond. One example of this is when a student with a learning disability may also need disability assessment or placement testing, may seek tutoring, and is likely to visit their academic advisor or counselor. A student with this circumstance may also be a self-advocate and seek ethical and legal services.

Assessment & Testing had moderate positive correlations with Student-to-Student communications (R_s (58) = .480, p = .00), Institution-to-Student communications (R_s (59) = .580, p = .00), Admissions (R_s (58) = .597, p = .00), Student Accounts (R_s (64) = .438, p = .00), Registration (R_s (67) = .463, p = .00), Financial Planning (R_s (29) = .556, p = .00), Career Services (R_s (28) = .537, p = .00), and Wellness Services (R_s (23) = .507, p = .00). Assessment & Testing was strongly positively correlated with Academic Advising (R_s (68) = .650, p = .00), Academic Counseling (R_s (64) = .690, p = .00), Bookstore (R_s (60) = .647, p = .00), Tutoring (R_s (36) = .684, p = .00), Ethical & Legal Services (R_s (19) = .783, p = .00), Orientation (R_s (39) = .722, p = .00), and Personal Counseling (R_s (28) = .741, p = .00), Assessment & Testing also had two services with which it had very strong positive correlations, Retention Services (R_s (33) = .867, p = .00), and Disability Services (R_s (31) = .860, p = .00). These services moderately, strongly, and very strongly correlated combined with 82% of the students rating it as a useful service. But, assessment and testing were also mandatory for some classes; students discovered this from many sources beginning with admissions, a reminder at orientation, multiple mailings, through academic advisement and counseling, and tutoring. It was even offered as part of Career Services.

The Library had the least number of correlations, with 6 services moderately positively correlating: Academic Counseling (R_s (61) = .425, p = .00), Retention Services (R_s (31) = .580, p = .00), Disability Services (R_s (34) = .459, p = .00), Assessment & Testing (R_s (60) = .539, p = .00), Ethical & Legal Services (R_s (17) = .508, p = .00), and Career Services (R_s (31) = .545, p = .00), The Library also had strong positive correlation with Personal Counseling (R_s (27) = .621, p = .00), and Wellness Services (R_s (34) = .670, p = .00). The Library was also used by 69% of the participants and the ones that used it liked it because

92% of them agreed slightly, agreed, and strongly agreed that it was a useful service. The Bookstore had a lot of correlations and it was a well-used service which was not surprising given its role in facilitating students having books, supplies, spirit-wear, and even software.

Table 14:

Student ratings of services: Academic services

Academic Services	Total N	Used Services N	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Technical Support	186	106	5	1	3	17	39	41	80
Academic Advising	184	136	13	9	9	14	38	53	48
Academic Counseling	184	84	13	3	6	10	20	32	100
Bookstore	183	118	8	6	7	23	34	40	65
Retention Services	183	36	7	5	2	7	9	6	147
Tutoring	183	48	9	3	3	8	14	11	135
Library	183	127	5	4	2	9	35	72	56
Disability Services	182	38	8	2	3	5	9	11	144
Assessment & Testing	181	76	8	3	3	12	25	25	105

Table 15:

Correlation: Academic services with all services

Correlations																														
Spearman's rho																														
		Technical Support	Academic Advising	Academic Counseling	Bookstore	Retention Services	Tutoring	Library	Disability Services	Assessment & Testing	Student-to-Student	Institution-to-Student	Course/Program Catalog	Admissions	Student Accounts	Student Records	Registration	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services	Wellness Services
Technical Support	Correlation Coefficient	1	.480**	.492**	.461**	.618**	.499**	.322**	.516**	.583**	0.218	.360**	.322**	.353**	.261*	.260*	.378**	.389*	0.214	.654**	.438*	.751**	.460**	.568**	0.239	.534**
	Sig. (2-tailed)	.	0	0	0	0	0.001	0.003	0.002	0	0.064	0.001	0.002	0.002	0.016	0.016	0	0.017	0.314	0	0.028	0	0.001	0.002	0.212	0.002
	N	92	61	75	33	39	81	32	50	73	86	87	78	85	85	90	37	24	31	25	19	46	26	29	30
Academic Advising	Correlation Coefficient	1	**.946****	.425**	**.847****	.557**	.357**	.645**	.650**	.370**	.554**	.377**	.467**	.350**	.345**	.429**	.380*	0.335	.549**	.783**	**.899****	.754**	.673**	.602**	.424*
	Sig. (2-tailed)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.017	0.087	0	0	0	0	0	0	0	0.01
	N	80	101	34	46	100	34	68	94	107	118	97	115	111	121	39	27	38	31	20	63	32	33	36	
Academic Counseling	Correlation Coefficient	1	.442**	**.836****	.651**	.425**	.659**	.690**	.329**	.683**	0.228	.571**	.332**	.339**	.508**	.383*	0.41	.638**	**.849****	**.904****	**.832****	.719**	.734**	.448*	
	Sig. (2-tailed)		0	0	0	0.001	0	0	0.008	0	0.054	0	0.004	0.004	0	0.049	0.058	0	0	0	0	0	0	0	0.019	
	N	67	34	36	61	32	54	63	73	72	62	74	70	73	27	22	29	23	19	40	28	24	27		
Bookstore	Correlation Coefficient	1	.708**	.373*	.379**	.621**	.647**	.351**	.440**	.416**	.573**	.530**	.459**	.402**	0.283	0.32	.612**	.708**	**.879****	.521**	.670**	.580**	.532**			
	Sig. (2-tailed)		0	0.012	0	0	0	0.002	0	0	0	0	0	0	0.094	0.137	0	0	0	0	0	0	0.001	0.002		
	N	34	45	90	32	60	79	86	101	87	95	94	101	36	23	30	30	18	54	29	31	30				
Retention Services	Correlation Coefficient	1	**.811****	.580**	**.877****	**.867****	.790**	.782**	0.141	.523**	0.126	0.083	0.317	.546*	.548*	.591**	**.831****	**.912****	**.921****	**.875****	**.868****	0.472				
	Sig. (2-tailed)		0	0.001	0	0	0	0	0.483	0.005	0.522	0.679	0.1	0.023	0.028	0.008	0	0	0	0	0	0.065				
	N	28	31	28	33	28	30	27	27	28	27	28	17	16	19	17	17	19	17	16	16					
Tutoring	Correlation Coefficient	1	.364*	.762**	.684**	.447**	.516**	0.13	0.306	-0.139	-0.108	0.094	0.396	0.332	0.404	.527*	.761**	.680**	.535*	.625**	.470*					
	Sig. (2-tailed)		0.018	0	0	0.005	0.001	0.442	0.073	0.405	0.52	0.576	0.061	0.165	0.069	0.017	0	0	0.013	0.003	0.024					
	N	42	27	36	38	37	37	35	38	38	38	23	19	21	20	17	22	21	20	23					
Library	Correlation Coefficient	1	.459**	.539**	.328**	.393**	.218*	.342**	.285**	.338**	.343**	0.065	-0.027	0.261	0.284	.508*	.316*	.621**	.545**	.670**						
	Sig. (2-tailed)		0.006	0	0.002	0	0.023	0.001	0.003	0.001	0	0.716	0.904	0.155	0.16	0.037	0.021	0.001	0.002	0						
	N	34	60	87	98	109	89	107	101	108	34	22	31	26	17	53	27	31	34							
Disability Services	Correlation Coefficient	1	**.860****	.546**	.381*	0.124	.398*	0.184	0.155	0.313	0.288	0.382	.608**	.781**	**.841****	.574**	.683**	.706**	0.381							
	Sig. (2-tailed)		0	0.002	0.034	0.521	0.036	0.331	0.432	0.092	0.28	0.159	0.01	0.001	0	0.008	0.003	0.005	0.132							
	N	31	29	31	29	28	30	28	30	16	15	17	15	14	20	17	14	17								
Assessment & Testing	Correlation Coefficient	1	.480**	.580**	.385**	.597**	.438**	.397**	.463**	0.244	0.269	.556**	.694**	.783**	.722**	.741**	.537**	.507**								
	Sig. (2-tailed)		0	0	0.001	0	0	0	0	0.229	0.239	0.002	0	0	0	0	0	0.003	0.013							
	N	58	59	67	58	64	63	67	26	21	29	27	19	39	28	28	23									

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Very Strong Strong Moderate

Technical Support is distributed in that the central IT department and Extended Learning offered technical support. Typically, system access issues, such as internet credentials or "net ID" were handled through central IT, while assistance with specific instructional technical functionality were handled through Extended Learning. A student commented that technical support "walked me through how to do an online presentation in Learn web conferencing." Technical support was a highly used service and 92% of students who accessed it rated it as helpful. Students appreciated "being able to stop by IT anytime during business hours or call anytime of the night and a live person was always available to resolve my issues." Responsiveness to resolve technical issues was also important as a student reported, "Tech Support quickly responded to me and helped with a paper I hadn't meant to submit. I could not undo it or resubmit, but they immediately directed me to my professor, who was able to help." Technical Support correlated moderately positively with 10 services: Academic Advising (R_s (92) = .480, p = .00), Academic Counseling (R_s (61) = .492, p = .00), Bookstore (R_s (75) = .461, p = .00), Tutoring (R_s (39) = .499, p = .00), Disability Services (R_s (32) = .516, p = .00), Assessment & Testing (R_s (50) = .583, p = .00), Placement Services (R_s (25) = .438, p = .00), Orientation (R_s (43) = .460, p = .00), Personal Counseling (R_s (26) = .568, p = .00), Wellness Services (R_s (30) = .534, p = .00). Technical Support correlated strongly positively with Retention Services (R_s (33) = .618, p = .00), Financial Planning (R_s (31) = .654, p = .00), and Ethical & Legal Services (R_s (19) = .751, p = .00). But, it did not have statistically significant correlations with Communication, Administrative Core or Student Communities service clusters, suggesting that the technical systems for these functions were more straightforward and transactional, accessible for those with active access to UNM systems.

Students had both positive and negative comments about Academic Advising services at UNM, which is not unusual. One student reported that, “an Academic Advisor took the time to really walk through all my degree options and give useful options/suggestions/recommendations for a path forward in completing my degree” while another simply stated, “My advisor told me to take the wrong course.” Obtaining the service was reported as challenging by several students. One student commented that their worst service experience was “trying to get counseling or advisement, my advisor was constantly changing, could never keep track, especially as an online student.” Another student reported,

> I have no advising. I take online, hybrid, and in-person classes based out of Gallup, and there is no advising support there. This has been frustrating, because when I contact main campus, they do not seem to understand or empathize with the situation of students not in ABQ.

Yet another student outlined the issue of access this way:

> 1. Having to take time off work to meet with Academic Advising because appointments aren't available other than M-Th 8-4:30...completely unrealistic for non-traditional students who have to take time off from work to meet with Advisors (who are then not helpful).
>
> 2. Multiple meetings with Academic Advisors who seem to be checking off a list of things to talk about without actually asking the right questions to understand where I am in my understanding of my options and coordination of my path forward.

Students also report positive experiences with Academic Advising. One student commented that the “academic advisor went out of her way to find other options for me to explore without even asking.” Another student reported, “my current advisor has to be the

best one so far. He has helped me a lot and I can ask him 50 questions all at once and he answers them all and helps me." Some advisors are reported to go out of their way to help students, reflected in these comments, "I've been offered independent study course options, academic advisor has stayed in close contact, I'm often invited to lectures, etc.," "My academic advisor has gone above and beyond for me, multiple times," and "I had an issue with an instructor and it was making me reluctant to continue. My adviser was wonderful and helped straighten it out." Another student commented, "The advisement center seems to genuinely care."

One student commented on not having access to Disability Services stating there was "no advisement in the bachelor's program at the extended universities for people with disabilities." However, another student used the service found it useful. Referring to the Accessibility Resource Center (ARC) for students with disabilities, this student said,

> I appreciate ARC and my advisor because she ushered me right into eligibility and answered all my questions promptly. I also really appreciate my Academic Advisor. He worked closely with me as a new student, and got me into the Liberal Arts program. He was always available for me. Finally, a financial aid advisor whiz took care of all my financial aid woes in Fall and got me aid for Spring. She is absolutely the best!

Another student reported, "my ARC adviser is very helpful." Though, regarding access to Tutoring, a student stated, "it is hard to get tutoring help when you cannot make it to the school. Communication can be troublesome with instructors."

Communication services. Students value communication as reported by this student, "my professors and advisor are the only ones who take any interest in me, but that is it and it

is because they communicate this through emails." Though one student summarized communication by staying that "at times communication can be difficult online." The Communication Services cluster was a highly used service and 82% to 92% agree slightly, agree, and strongly agree that these were useful services, as shown in Table 16. Table 17 shows correlations with the other services. The most correlations existed with Institution-to-Student communications as almost all services correlated except disability and wellness services. Institution-to-Student communications showed moderate positive correlations with Academic Advising (R_s (107) = .554, p = .00), Bookstore (R_s (86) = .440, p = .00), Tutoring (R_s (37) = .516, p = .00), Assessment & Testing (R_s (59) = .480, p = .00), Student-to-Student communications (R_s (99) = .433, p = .00), Faculty-to-Student communications (R_s (131) = .423, p = .00), Financial Aid (R_s (91) = .461, p = .00), Admissions (R_s (96) = .496, p = .00), Registration (R_s (123) = .502, p = .00), Student Activities (R_s (39) = .542, p = .00), Student Population Segments (R_s (26) = .580, p = .00), Financial Planning (R_s (36) = .521, p = .00), Placement Services (R_s (29) = .691, p = .00), Orientation (R_s (59) = .582, p = .00), Personal Counseling (R_s (34) = .597, p = .00), and Career Services (R_s (33) = .583, p = .00). Institution-to-Student communications had strong positive correlate with Academic Counseling (R_s (73) = .683, p = .00), Retention Services (R_s (30) = .782, p = .00), and Placement Services (R_s (29) = .691, p = .00). And, Institution-to-Student correlations also very strongly positively correlated with Ethical & Legal Services (R_s (20) = .811, p = .00). The university and many departments use social media and send regular emails with announcements, invitations, news, and deadlines. Proactive contacts, such as communications from the institution, reach students who may not otherwise be in touch or aware of university happenings (Simpson,

2004). Timing of communications were another consideration as one student expressed that their worst experience with services was “getting payment reminders at 5am via text!”

Faculty-to-Student communication was important for online students. One student wrote, “3/4th thru an online course, the Professor stopped all communication with all online students. Online classmates were messaging each other as what to do because the Professor would not respond to anyone.” Students reported, “some Professors will email me of my accomplishments and give that personal attention to my educational goals” and “they reach out to me when there is a concern about my performance. They provide resources to help me succeed”, and “some Professors and assistants track our work and remind me of missing assignments and/or problems I may be having that is effecting my online course.”

Not all students had positive communication experiences with their instructors. One student stated,

> Maybe a teacher didn't get back to me in a specific time-frame, past a deadline OR in the online environment your peers can get very bitchy... and you have no recourse other than to complain to the instructor. You feel kinda vulnerable to the online experience and have to be so cautious how you communicate.

Another student commented about a worst experience:

> Teachers not replying to my e-mails when I have questions that need answers. Some of those questions regard when things are due, as they have sent e-mails explaining that it will be postponed, them never getting back to me and then I find out that it's due in a week. It's really ridiculous. I feel like online teachers most of the time do not care whether their students pass or fail.

Table 16:

Analysis of services: Communication services

Communication Services	Total N	Used Services n	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Student-to-Student	182	124	7	3	7	22	37	48	58
Faculty-to-Student	182	168	6	2	5	21	52	82	14
Institution-to-Student	181	135	12	3	9	35	42	34	46

Table 17:

Correlation: Communication services with all services

Correlations																								
Spearman's rho																								
		Academic Advising	Academic Counseling	Bookstore	Retention Services	Tutoring	Disability Services	Assessment & Testing	Student-to-Student	Faculty-to-Student	Institution-to-Student	Financial Aid	Admissions	Registration	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services	Wellness Services
Student-to-Student	Correlation Coefficient	.370**	.329**	.351**	.790**	.447**	.546**	.480**	1	.409**	.433**	0.206	.403**	.297**	.540**	.443*	.497**	.601**	**.803****	.515**	.443*	.461**	.554**
	Sig. (2-tailed)	0	0.008	0.002	0	0.005	0.002	0	.	0	0	0.061	0	0.001	0	0.021	0.002	0	0	0	0.013	0.008	0.001
	N	94	63	79	28	38	29	58	122	120	99	83	84	112	40	27	36	32	21	49	31	32	35
Faculty-to-Student	Correlation Coefficient	.364**	.253*	.355**	0.315	0.218	0.206	.239*	.409**	1	.423**	0.126	.324**	.342**	.431**	.444*	.522**	.583**	.766**	.341**	.652**	.467**	.571**
	Sig. (2-tailed)	0	0.026	0	0.079	0.171	0.243	0.045	0	.	0	0.193	0	0	0.004	0.018	0	0	0	0.004	0	0.003	0
	N	123	78	107	32	41	34	71	120	166	131	109	116	149	43	28	41	33	21	68	36	38	40
Institution-to-Student	Correlation Coefficient	.554**	.683**	.440**	.782**	.516**	.381*	.580**	.433**	.423**	1	.461**	.496**	.502**	.542**	.580**	.521**	.691**	**.811****	.582**	.597**	.583**	.377*
	Sig. (2-tailed)	0	0	0	0	0.001	0.034	0	0	0	.	0	0	0	0	0.002	0.001	0	0	0	0	0	0.028
	N	107	73	86	30	37	31	59	99	131	133	91	96	123	39	26	36	29	20	59	34	33	34

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Very Strong Strong Moderate

Administrative core. The Administrative Core at UNM are the cluster of services the students must interact with in order to be a student. Though one student commented that it is "incredibly hard to navigate online registration services; extra time needed to seek advice and/or help; had to pay annual fees for uploading the documentation that was required for admissions." It is not surprising that these services were highly used and 90% or more students responded that each of these services were useful, as shown in Table 18. Not surprisingly, the Administrative Core services correlate with many other services, shown in Table 19.

Financial Aid did not correlate strongly or very strongly with any services, but did have moderate correlations with Institution-to-Student communications (R_s (91) = .461, p = .00), Course/Program Catalog (R_s (108) = .473, p = .00), Admissions (R_s (93) = .561, p = .00), Student Accounts (R_s (105) = .445, p = .00), Student Records (R_s (101) = .509, p = .00), Registration (R_s (109) = .445, p = .00), Financial Planning (R_s (36) = .506, p = .00). Basically, Financial Aid correlated with all other services within the Administrative Core, as well as Institution-to-Student communications and Financial Planning. The service pattern of correlations with Financial Aid made sense. Admissions correlated with sixteen services moderately and five services strongly. Registration correlated with eleven services at the moderate level and 4 services at the strong level. One student commented, "I enjoy registering for classes and handling all the related tasks online. It's great to not have to go to the campus, pay for parking, and wait in line to take online courses." Regarding registration holds, another student wrote "I've been told more than once that I don't have any holds on my account, and then when I go to register I can't sign up for the class I need because I have a hold. There are ways for me to deal with that ahead of time, though." Another student stated they encountered "indifference and little help when trying to pay my tuition in-person."

Table 18:

Analysis of services: Administrative Core

Administrative Core	Total N	Used Services n	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Financial Aid	173	117	2	2	6	8	33	66	56
Schedule of Classes	173	164	2	2	6	14	38	102	9
Course/Program Catalog	173	157	1	2	6	18	44	86	16
Admissions	173	125	6	3	4	24	39	49	48
Student Accounts	173	151	3	1	7	15	47	78	22
Student Records	173	145	3	1	7	16	42	76	28
Registration	173	161	4	3	5	15	43	91	12

Table 19:

Correlation: Administrative core with all services

Correlations																							
Spearman's rho																							
		Academic Advising	Academic Counseling	Bookstore	Retention Services	Assessment & Testing	Student-to-Student	Institution-to-Student	Financial Aid	Schedule of Classes	Course/Program Catalog	Admissions	Student Accounts	Student Records	Registration	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services
Financial Aid	Correlation Coefficient	.242*	.299*	.272*	0.298	.295*	0.206	.461**	1	.528**	.473**	.560**	.445**	.509**	.455**	0.142	0.252	.506**	0.266	0.276	0.188	0.07	0.247
	Sig. (2-tailed)	0.018	0.022	0.014	0.148	0.03	0.061	0	.	0	0	0	0	0	0	0.402	0.214	0.002	0.155	0.268	0.15	0.71	0.165
	N	96	58	82	25	54	83	91	116	113	108	93	105	101	109	37	26	36	30	18	60	31	33
Schedule of Classes	Correlation Coefficient	.257**	.257*	.359**	0.046	.267*	.190*	.313**	.528**	1	.678**	.498**	.478**	.536**	.607**	0.121	0.16	0.238	0.254	0.167	0.132	0.154	0.296
	Sig. (2-tailed)	0.004	0.028	0	0.821	0.028	0.044	0	0	.	0	0	0	0	0	0.446	0.415	0.134	0.154	0.482	0.281	0.377	0.075
	N	122	73	104	27	68	113	125	113	162	154	120	146	139	155	42	28	41	33	20	69	35	37
Course/Program Catalog	Correlation Coefficient	.377**	0.228	.416**	0.141	.385**	.330**	.283**	.473**	.678**	1	.599**	.593**	.613**	.510**	0.157	0.184	0.229	0.245	0.064	.328**	0.169	0.203
	Sig. (2-tailed)	0	0.054	0	0.483	0.001	0	0.002	0	0	.	0	0	0	0	0.322	0.359	0.156	0.17	0.783	0.006	0.331	0.243
	N	118	72	101	27	67	109	121	108	154	155	119	141	136	150	42	27	40	33	21	69	35	35
Admissions	Correlation Coefficient	.467**	.571**	.573**	.523**	.597**	.403**	.496**	.560**	.498**	.599**	1	.776**	.743**	.664**	.438**	.499**	.473**	.645**	.629**	.585**	.538**	.592**
	Sig. (2-tailed)	0	0	0	0.005	0	0	0	0	0	0	.	0	0	0	0.005	0.008	0.003	0	0.002	0	0.001	0
	N	97	62	87	27	58	84	96	93	120	119	123	116	111	120	40	27	38	33	21	67	34	37
Student Accounts	Correlation Coefficient	.350**	.332**	.530**	0.126	.438**	.321**	.385**	.445**	.478**	.593**	.776**	1	**.905****	.705**	0.235	0.194	.376*	.358*	0.216	.429**	.339*	.398*
	Sig. (2-tailed)	0	0.004	0	0.522	0	0.001	0	0	0	0	0	.	0	0	0.139	0.323	0.017	0.041	0.348	0	0.043	0.016
	N	115	74	95	28	64	107	120	105	146	141	116	149	136	145	41	28	40	33	21	66	36	36
Student Records	Correlation Coefficient	.345**	.339**	.459**	0.083	.397**	.302**	.351**	.509**	.536**	.613**	.743**	**.905****	1	.740**	0.234	0.115	.347*	.356*	0.191	.365**	0.235	0.221
	Sig. (2-tailed)	0	0.004	0	0.679	0.001	0.002	0	0	0	0	0	0	.	0	0.131	0.568	0.031	0.042	0.406	0.003	0.181	0.195
	N	111	70	94	27	63	103	114	101	139	136	111	136	143	142	43	27	39	33	21	65	34	36
Registration	Correlation Coefficient	.429**	.508**	.402**	0.317	.463**	.297**	.502**	.455**	.607**	.510**	.664**	.705**	.740**	1	0.099	0.113	.384*	.488**	.452*	.432**	0.321	.411*
	Sig. (2-tailed)	0	0	0	0.1	0	0.001	0	0	0	0	0	0	0	.	0.53	0.566	0.013	0.004	0.04	0	0.06	0.012
	N	121	73	101	28	67	112	123	109	155	150	120	145	142	159	43	28	41	33	21	70	35	37
** Correlation is significant at the 0.01 level (2-tailed).				**Very Strong**	Strong	Moderate																	
* Correlation is significant at the 0.05 level (2-tailed).																							

Student communities. The Student Communities category of services is small with only two services listed, student activities and student population segments, see Table 20. These services were used by 26% or fewer of my study participants. These two services correlated very strongly and positively with each other (R_s (27) = .974, p = .00), and had moderate positive correlations with Retention Services (R_s (16) = .548, p = .00), Student-to-Student communications (R_s (27) = .443, p = .00), Faculty-to-Student communications (R_s (28) = .444, p = .00), Institution-to-Student communications (R_s (26) = .580, p = .00), Admissions (R_s (27) = .499, p = .00), Financial Planning (R_s (24) = .505, p = .00), Ethical & Legal Services (R_s (18) = .540, p = .00), and Orientation (R_s (23) = .522, p = .00), see Table 21. One user of these services commented,

> My experience with UNM student service programs included McNair, El Centro del La Raza as well as OILS, all of these services and programs made me feel like I belong and was included in the University experience as a LOBO. My success is shared with these amazingly committed teams.

Another student reported, “There are no services for me. I'm not a minority, so I'm excluded from many of the 'communities' here. I have not found a group that seems it would be a good fit.” No formalized student community exists for online students at UNM as this student highlights, “The initiative to start an online student club was encouraging but unfortunately it did not happen this semester and I am now graduating.”

Table 20:

Analysis of services: Student Communities

Student Communities	Total N	Used Services n	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Student Activities	170	44	4	8	3	9	12	8	126
Student Population Segments	169	29	5	7	1	5	7	4	140

Table 21:

Correlation: Student communities with all services

Correlations														
Spearman's rho														
		Retention Services	Student-to-Student	Faculty-to-Student	Institution-to-Student	Admissions	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services
Student Activities	Correlation Coefficient	.546*	.540**	.431**	.542**	.438**	1	**.974****	.574**	.500**	.539*	.569**	.432*	.424*
	Sig. (2-tailed)	0.023	0	0.004	0	0.005	.	0	0.001	0.008	0.017	0.001	0.035	0.024
	N	17	40	43	39	40	43	27	28	27	19	30	24	28
Student Population Segments	Correlation Coefficient	.548*	.443*	.444*	.580**	.499**	**.974****	1	.505*	0.399	.540*	.522*	0.394	0.388
	Sig. (2-tailed)	0.028	0.021	0.018	0.002	0.008	0	.	0.012	0.06	0.021	0.011	0.086	0.074
	N	16	27	28	26	27	27	28	24	23	18	23	20	22

** Correlation is significant at the 0.01 level (

* Correlation is significant at the 0.05 level (2

Very Strong Strong Moderate

Personal services. With the exception of 72 out of 168 students who used orientation, which was mandatory at UNM for freshmen, transfer students, and some departments, roughly 1/4 of participants used personal services, see Table 22. Regarding orientation, one student stated:

> I was made to take an in-person, mandatory department orientation (arts & sciences). I would appreciate an online orientation, since I am pursuing a degree that is 100%, completely online. I also had a professor who did not seem to know the material, but that was resolved and probably wasn't related to my taking online courses. It's just something that happens. But I definitely would have appreciated the ability to have an online orientation. What if I didn't live close enough to make the trip?

An interesting correlation pattern shown in Table 23 was the proliferation of very strong correlations between many services and with Ethical & Legal Services in particular. Ethical & Legal Services was very strongly positively correlated with Academic Advising (R_s (20) = .899, p = .00), Acaemic Counseling (R_s (19) = .904, p = .00), Bookstore (R_s (18) = .879, p = .00), Retention Services (R_s (17) = .912, p = .00), Disability Services (R_s (14) = .841, p = .00), Student-to-Student communications (R_s (21) = .803, p = .00), Institution-to-Student communications (R_s (20) = .811, p = .00), Financial Planning (R_s (18) = .824, p = .00), Placement Services (R_s (19) = .978, p = .00), Orientation (R_s (18) = .968, p = .00), Personal Counseling (R_s (20) = .982, p = .00), and Career Services (R_s (18) = .959, p = .00). Ethical & Legal Services was only used by 23 students or 13.7% of students who responded to the question. One possible explanation for this pattern is that UNM uses copyright detection software to scan the UNM network for copyright violations such as illegal music, software, or video downloads. About 20 copyright infringements occur each semester. When

a copyright violation is detected, the IP address for the computer being used is blocked from the UNM network until the student takes mandatory steps which include communications with the student, notifying UNM Legal Counsel, counseling by the Dean of Students office, counseling by the central IT department (receiving a Technical Support service), removal of the item from the computer, and may include counseling with other departments and perhaps a recommendation to purchase software from the UNM bookstore. Since the IP address of the computer is blocked, if the student wanted to surf the internet within the UNM network using that computer, they must take these steps in order to gain access again. As mentioned in the Academic Services section, students who accessed Disability Services and utilized many other campus services and resources, may have also sought information or assistance through Ethical & Legal Services.

Students did not comment as much specifically on services within Personal Services. Regarding Student Health & Counseling (SHAC), a student commented, “I have had many appointments with the SHAC counselors and they have been very welcoming and caring.” Other students wrote “the Veterans office has been amazing,” and “great assistance received at Career Services. The Career Counselor was sincerely interested in my success, very supportive, and offered great, tailored advice.”

Table 22:

Analysis of services: Personal services

Personal Services	Total N	Used Services n	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Financial Planning	169	42	2	5	2	3	17	13	127
Placement Services	167	35	3	4	2	4	14	8	132
Ethical & Legal Services	168	23	3	4	2	3	9	2	145
Orientation	168	72	6	13	8	12	24	9	96
Personal Counseling	168	37	4	4	2	3	11	13	131
Career Services	168	40	5	5	1	7	16	6	128
Wellness Services	168	41	4	2	1	4	15	15	127

Table 23:

Correlation: Personal services with all services

Correlations																												
Spearman's rho																												
		Technical Support	Academic Advising	Academic Counseling	Bookstore	Retention Services	Tutoring	Library	Disability Services	Assessment & Testing	Student-to-Student	Faculty-to-Student	Institution-to-Student	Financial Aid	Admissions	Student Accounts	Registration	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services	Wellness Services
Financial Planning	Correlation Coefficient	.654**	.549**	.638**	.612**	.591**	0.404	0.261	.608**	.556**	.497**	.522**	.521**	.506**	.473**	.376*	.384*	.574**	.505*	1	**.822****	**.824****	.720**	**.849****	.758**	.777**
	Sig. (2-tailed)	0	0	0	0	0.008	0.069	0.155	0.01	0.002	0.002	0	0.001	0.002	0.003	0.017	0.013	0.001	0.012	.	0	0	0	0	0	0
	N	31	38	29	30	19	21	31	17	29	36	41	36	36	38	40	41	28	24	41	27	18	29	22	25	24
Placement Services	Correlation Coefficient	.438*	.783**	**.849****	.708**	**.831****	.527*	0.284	.781**	.694**	.601**	.583**	.691**	0.266	.645**	.358*	.488**	.500**	0.399	**.822****	1	**.978****	**.899****	**.884****	**.890****	.597**
	Sig. (2-tailed)	0.028	0	0	0	0	0.017	0.16	0.001	0	0	0	0	0.155	0	0.041	0.004	0.008	0.06	0	.	0	0	0	0	0.003
	N	25	31	23	30	17	20	26	15	27	32	33	29	30	33	33	33	27	23	27	33	19	27	24	24	23
Ethical & Legal Services	Correlation Coefficient	.751**	.899**	**.904****	**.879****	**.912****	.761**	.508*	.841**	.783**	**.803****	.766**	**.811****	0.276	.629**	0.216	.452*	.539*	.540*	**.824****	**.978****	1	**.968****	**.982****	**.959****	.597**
	Sig. (2-tailed)	0	0	0	0	0	0	0.037	0	0	0	0	0	0.268	0.002	0.348	0.04	0.017	0.021	0	0	.	0	0	0	0.007
	N	19	20	19	18	17	17	17	14	19	21	21	20	18	21	21	21	19	18	18	19	21	18	20	18	19
Orientation	Correlation Coefficient	.460**	.754**	**.832****	.521**	**.921****	.680**	.316*	.574**	.722**	.515**	.341**	.582**	0.188	.585**	.429**	.432**	.569**	.522*	.720**	**.899****	**.968****	1	.553**	.519**	.381*
	Sig. (2-tailed)	0.001	0	0	0	0	0	0.021	0.008	0	0	0.004	0	0.15	0	0	0	0.001	0.011	0	0	0	.	0.002	0.002	0.038
	N	46	63	40	54	19	22	53	20	39	49	68	59	60	67	66	70	30	23	29	27	18	70	29	32	30
Personal Counseling	Correlation Coefficient	.568**	.673**	.719**	.670**	**.875****	.535*	.621**	.683**	**.741****	.443*	.652**	.597**	0.07	.538**	.339*	0.321	.432*	0.394	**.849****	**.884****	**.982****	.553**	1	**.957****	.668**
	Sig. (2-tailed)	0.002	0	0	0	0	0.013	0.001	0.003	0	0.013	0	0	0.71	0.001	0.043	0.06	0.035	0.086	0	0	0	0.002	.	0	0.001
	N	26	32	28	29	17	21	27	17	28	31	36	34	31	34	36	35	24	20	22	24	20	29	36	21	23
Career Services	Correlation Coefficient	0.239	.602**	.734**	.580**	**.868****	.625**	.545**	.706**	.537**	.461**	.467**	.583**	0.247	.592**	.398*	.411*	.424*	0.388	.758**	**.890****	**.959****	.519**	**.957****	1	.627**
	Sig. (2-tailed)	0.212	0	0	0.001	0	0.003	0.002	0.005	0.003	0.008	0.003	0	0.165	0	0.016	0.012	0.024	0.074	0	0	0	0.002	0	.	0.001
	N	29	33	24	31	16	20	31	14	28	32	38	33	33	37	36	37	28	22	25	24	18	32	21	38	26
Wellness Services	Correlation Coefficient	.534**	.424*	.448*	.532**	0.472	.470*	.670**	0.381	.507*	.554**	.571**	.377*	0.032	.389*	0.255	0.275	0.315	0.378	.777**	.597**	.597**	.381*	.668**	.627**	1
	Sig. (2-tailed)	0.002	0.01	0.019	0.002	0.065	0.024	0	0.132	0.013	0.001	0	0.028	0.861	0.019	0.117	0.095	0.102	0.075	0	0.003	0.007	0.038	0.001	0.001	.
	N	30	36	27	30	16	23	34	17	23	35	40	34	33	36	39	38	28	23	24	23	19	30	23	26	40

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Very Strong Strong Moderate

The service-to-service correlations showed that as students used services and found them useful, they found other services useful, too. Another factor that might contribute to students' use was the method in which services are accessed. Also, students may opt not to use services at all when they are not mandatory.

Format for Use and Non-Use

I wanted to know how students interacted with UNM services and why they might choose not to interact at all. To do this, I placed two more questions at the end of the services section to ascertain the format in which students access services at UNM and their reasons for not using services. Students could select as many options as applied to their situation. Adding this to each section would have made the survey too long and created too much survey design complexity. Thus, these questions were placed at the end of the services section and reflected students' usage patterns.

Format of use. Students were asked to report on the format through which they used the service, selecting all responses that apply. Table 24 lists the formats and their frequency of use. Online and email were the most used format. Phone and in person were moderately used. Chat was the least used format. This could be because many services do not offer chat as an option to access their service. Though not as frequently used by most students, chat was identified by these two students in their comments about their best service experience, "Chatting with Financial aid about my account was convenient and helpful" and "chat. I needed assistance with library support."

Table 24:

Analysis of services: Format of use

Format	Frequency
Online	156
Email	113
In person	66
Phone	56
Chat	26

Reasons for not using services. Students were asked to provide reasons why they did not use the services, selecting all responses that apply. Table 25 shows the most prevalent response for not using services is that students did not need them. One student explained, "All I really need as an online student is the independence, flexibility, and necessary resources to complete my work. I haven't put much thought into if the people at the university think I matter to them."

Table 25:

Analysis of services: Reasons for not using services

Reasons	Frequency
Did Not Need	131
Did Not Want	29
Not Accessible When Needed	24
Did Not Know Services Was Offered	25
Service Not Available for Online Students	22
All Services Were Used	19

Mattering

To measure students' feelings of mattering, I used a Unified Measure of University Mattering instrument, the UMUM-15 (France, 2011). See Appendix A for the full list of the mattering questions presented in the survey. Students were asked to select a response to each of the 15 questions from a 6-point Likert scale, 1= "strongly disagree", 2= "disagree", 3= "disagree slightly", 4= "agree slightly", 5= "agree", and 6= "strongly agree". For the analysis of students' feelings of mattering, I used all responses if participants responded to half or more of the questions in this section. Missing values were treated as missing for the purpose of analysis. The N for the mattering section was 158, which reflected a loss of student participation entering this section of the survey.

I selected the UMUM-15 because it was a pre-developed and tested instrument, tested for construct validity, and designed to provide a single score in which to gauge college students feelings of mattering to their institution. The single score, or mattering mean, was calculated for each participant. Table 26 illustrates the range of mattering mean and their frequencies with the Likert scale used in the survey. Roughly 2/3 of the study participants indicated through the mattering instrument that they did not feel they matter to UNM versus 1/3 who did, though actual qualitative responses reflected by specific statements that about half of students do not feel they matter to UNM, see Table 27. Question 3 of the qualitative section asked students to "describe how you know you matter to people who work at the university." Thirty-nine students responded to question 3 with comments such as "I don't really think I do. Often times I feel like a number," "I don't. I think I am just a student in a chair," "I know I am a statistic," "You don't, you're a number not a person," "I just add to the

data set - just a faceless nameless number," or simply "I don't." One student expressed the sentiment with sarcasm, "yeah, uh huh, riiigghht"

Another student explained:

> I don't know that. My experience with the UNM staff has been generally negative. In my entire time at UNM I have never believed that the advisors and faculty actually care about the students. They act like I am an annoyance. Advisors rarely get back to me in a timely manner, if they get back to me at all. The professors have generally been great, though.

Also in response to question 3, students expressed ways in which they do feel they matter to the people who work at UNM. Students commented, "Because they have guided me through my academic career," "when I email an instructor, they email me back. When I ask to meet with the instructor and they are happy to see me and help answer any question," "If they go out of their way to help you," and "When they feel the issue is as important as I make it out to be." One student commented they know they matter when they receive "Surveys asking about my opinion. Staff talk to me about what would work best for me." Students also reported "I am always greeted and treated with respect," "They take a lot of effort and time to help me, even in small ways," "They send emails about what is going on or if something bad happened," and "they respond quickly to my needs." One student stated, "Don't know that I 'matter' but when I'm in contact with someone they are courteous and as helpful as they are able to be."

Table 26:

Analysis of mattering: Mean and Frequency

Mattering Mean	Frequency	Likert
1.0-1.99	8	1 = Strongly disagree
2.0-2.99	33	2 = Disagree
3.0-3.99	54	3 = Disagree slightly
4.0-4.99	48	4 = Agree Slightly
5.0-5.99	15	5 = Agree

Table 27:

Qualitative indications of mattering

Responses	Frequency
I matter	54
I don't matter	39
Total	93

Services and Mattering

This study hypothesized that students' feelings of mattering increased as they used and valued support resources. As previously stated, the list of services was generated from the WCET "spider web" framework (Shea & Armitage, 2002). These 28 services were the independent variables (IV). The dependent variable (DV) was the mattering mean based on responses to the UMUM-15 instrument (France, 2011). The Spearman's rho correlation shows the statistical significance level of the relationship between students' use of services (IV) and their feelings of mattering (DV). The full list of services and their correlations with mattering are shown in Table 28. Nine services correlated with students' feelings of

mattering as shown in Table 29. Academic Advising and students' feelings of mattering moderately positively correlated, $R_s(112) = .511$, $p = .00$. The other services that moderately positively correlated with students' feelings of mattering were: Academic Counseling = $R_s(69) = .568$, $p = .00$, Institution-to-Student communications = $R_s(115) = .416$, $p = .00$, Placement Services = $R_s(31) = .546$, $p = .00$, Ethical & Legal Services = $R_s(20) = .503$, $p = .02$, Orientation = $R_s(65) = .518$, $p = .00$, Personal Counseling = $R_s(34) = .572$, $p = .00$, and Career Services = $R_s(34) = .518$, $p = .00$.

Retention Services strongly positively correlated with students' feelings of mattering, = $R_s(25) = .625$, $p = .00$, which makes sense given the use of services analysis and its correlation with many other services. Eight services correlated moderately in the services to mattering analysis.

The types of services that showed correlations with mattering share a common theme. These services tend to function through relationship-based more than encounter-based interactions suggesting that relationships formed between the student and staff or faculty contribute to students' feelings of mattering. Gutek (1995) discussed two forms of interaction between customers and providers: relationships and encounters. She defined the characteristics of relationship-style interactions to include repeated contact with a particular individual, the expectation and anticipation of future contact, getting to know each other, and the development of shared history. Trust develops over time in these types of interactions as the customer and provider get to know each other and they form an attachment. Because of this relationship, customers and providers have flexibility and can change processes over time. In contrast, encounter-style interactions are single and brief where the customer and provider remain strangers. In this style, the provider may be a collection of different people

but they are expected to perform similarly. Encounters are designed for efficiency even though they may not be. Gutek (1995) also explained that the setting of higher education provides a hybridized service context with both relationship- and encounter-style interactions, pseudorelationships.

Combined, the nine services that correlated with mattering represent three of the five service categories outlined in the "spider web" of services framework. The three categories represented are Academic Services, Communication Services, and Personal Services, also shown in Table 29. Students specifically expressed the importance of some of these services in their qualitative responses. One student commented,

> My counselor at UNM has been amazing. I am a distance learning student who is trying to complete my degree from San Diego, CA. Without him I would not be graduating in December after a 20 year "take a semester off" hiatus.

As discussed under the use of services analysis, Institution-to-Student communications are important to students. Proactive contacts, such as communications from the institution, reach students who may not otherwise be in touch or aware of deadlines or university happenings (Simpson, 2004). The social media component of this service may also enhance students' relationships with the UNM community.

I expected to see that Student-to-Student communications would correlate with students' feelings of mattering because students' contact with each other is important to them. However, that correlation did not appear. It is perhaps because the student-to-student relationship does not reflect feelings of mattering to the institution.

The services within the Administrative Core are typically more encounter-based interactions. Encounters are typically single interactions, fleeting, and usually involve

multiple providers over successive contacts (Gutek, 1995). In fact, most interactions with the services in the Administrative Core are encounter-style interaction such as transactions that are handled electronically.

Demographics and Mattering

I used an ANOVA analysis to determine statistical significance between mattering and student demographics. Ethnicity showed a statistical significant positive relationship with mattering ($p = .049$). Post hoc tests require at least two cases to conduct the analysis. The data set only had one Native Hawaiian student. To perform the post hoc tests, the single Hawaiian student's ethnicity was changed to Asian, as Pacific Islanders and Asians are commonly grouped together. Fisher's LSD did show statistically significant differences between Whites and Hispanics at $p = .005$ but none of the other post hoc tests showed statistical significance between the groups for this study: Tukey HSD $p = .070$, Bonferroni $p = .101$ Dunnett t $p = .323$, and Scheff $p = .457$. The post hoc testing did not help to explain the differences among the means. The statistically significant ANOVA omnibus test, though, does indicate there is a difference in feelings of mattering among ethnic groups. Also, the mattering means of Hispanics ($\mu = 3.98$) were higher than the mattering means for Whites ($\mu = 3.46$) indicating that Hispanics feel they matter more to UNM than Whites do. As New Mexico's flagship institution, UNM promotes a strong identity, or branding, of Hispanic culture. It honors the traditions of the Southwest through its architecture, through academic programs such as Flamenco Dancing, and even through sports as the mascot for UNM is the Lobo, the Spanish word for wolf. The differences in feelings of mattering could also be due to cultural differences in the way students interpret responses or actions or in their perceptions of a situation.

There was also a statistically significant difference between majors and mattering of $p = .028$. This was interesting because it suggests that students enrolled in particular majors may have levels of support that students in other majors do not have. I consulted with a subject matter expert with the north campus health sciences center and was told that is the case with particular health science programs. Several departments offer specific support services for their students. I did not run post hoc testing on the majors because 13 of the majors represented in the data had only one case per major and could not be used in the analysis. There were too many majors to remove to yield satisfying information.

Table 28:

Correlations between mattering and services

Correlations

			Mattering All
Spearman's rho	Technical Support	Correlation Coefficient	.225*
		Sig. (2-tailed)	.043
		N	81
	Academic Advising	Correlation Coefficient	.511**
		Sig. (2-tailed)	.000
		N	112
	Academic Counseling	Correlation Coefficient	.568**
		Sig. (2-tailed)	.000
		N	69
	Bookstore	Correlation Coefficient	.203*
		Sig. (2-tailed)	.045
		N	98
	Retention Services	Correlation Coefficient	.625**
		Sig. (2-tailed)	.001
		N	25
	Tutoring	Correlation Coefficient	.395*
		Sig. (2-tailed)	.017
		N	36

Library	Correlation Coefficient	.166
	Sig. (2-tailed)	.092
	N	104
Disability Services	Correlation Coefficient	.378
	Sig. (2-tailed)	.057
	N	26
Assessment & Testing	Correlation Coefficient	.376**
	Sig. (2-tailed)	.003
	N	62
Student-to-Student	Correlation Coefficient	.148
	Sig. (2-tailed)	.134
	N	104
Faculty-to-Student	Correlation Coefficient	.235**
	Sig. (2-tailed)	.005
	N	142
Institution-to-Student	Correlation Coefficient	.416**
	Sig. (2-tailed)	.000
	N	115
Financial Aid	Correlation Coefficient	.119
	Sig. (2-tailed)	.231
	N	104
Schedule of Classes	Correlation Coefficient	.058
	Sig. (2-tailed)	.491
	N	143
Course/Program Catalog	Correlation Coefficient	.148
	Sig. (2-tailed)	.085
	N	136
Admissions	Correlation Coefficient	.380**
	Sig. (2-tailed)	.000
	N	109
Student Accounts	Correlation Coefficient	.178*
	Sig. (2-tailed)	.041
	N	132
Student Records	Correlation Coefficient	.168
	Sig. (2-tailed)	.060
	N	127
Registration	Correlation Coefficient	.233**
	Sig. (2-tailed)	.006

		N	140
	Student Activities	Correlation Coefficient	.288
		Sig. (2-tailed)	.068
		N	41
	Student Population Segments	Correlation Coefficient	.354
		Sig. (2-tailed)	.076
		N	26
	Financial Planning	Correlation Coefficient	.316
		Sig. (2-tailed)	.057
		N	37
	Placement Services	Correlation Coefficient	.546**
		Sig. (2-tailed)	.002
		N	31
	Ethical & Legal Services	Correlation Coefficient	.503*
		Sig. (2-tailed)	.024
		N	20
	Orientation	Correlation Coefficient	.518**
		Sig. (2-tailed)	.000
		N	65
	Personal Counseling	Correlation Coefficient	.572**
		Sig. (2-tailed)	.000
		N	35
	Career Services	Correlation Coefficient	.518**
		Sig. (2-tailed)	.002
		N	34
	Wellness Services	Correlation Coefficient	.280
		Sig. (2-tailed)	.094
		N	37
	Strong	Moderate	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 29:

Nine service correlations with mattering

Service	Correlation Strength	Percentage of Use	Service Category
Academic Advising	Moderate	74	Academic Services
Academic Counseling	Moderate	46	
Retention Services	Strong	20	
Institution-to-Student	Moderate	75	Communication Services
Placement Services	Moderate	21	Personal Services
Ethical & Legal Services	Moderate	14	
Orientation	Moderate	43	
Personal Counseling	Moderate	22	
Career Services	Moderate	24	

Qualitative Analysis

The qualitative analysis involved any record with responses in the qualitative portion. Out of the 186 used records for the quantitative analysis, 114 participants completed the qualitative portion. I conducted the analysis through open and axial coding.

I wanted to understand what kind of experiences constituted “best” and “worst” experiences for students and also to find out how they defined mattering for themselves within the context of their interactions with services at UNM, or “mattering to UNM.” I performed open coding to analyze these responses independently of the other two sets of responses. In other words, for analyzing responses to the question about best experiences, I only looked at responses to that question and created codes to summarize responses. I repeated that process for the “worst” experience and the “mattering to UNM” responses. By

explaining how students know they matter, they provided their view of what mattering means to them and how they experienced it at UNM. For these, I considered their response to the question, interpreted whether they presented their experience from a positive or negative point of view and whether they provided a services- or instruction-based response. Then, I performed the analysis through axial coding, considering the responses for each participant, in toto. Finally, I converged these findings with the quantitative findings to assess for relevant themes.

Their experiences. Students were asked to describe their best and worst experiences(s) with services as an online student at UNM and to describe how they know they matter to people who work at the university. For each question, I removed responses in which the participant left that response blank or gave a response such as "none" or "n/a". Fourteen students reported "none" or "nothing" indicating they did not have a "worst" experience and six students reported the same for not having a "best" experience. Five students reported the same for "matter to me" indicating they did not have an experience to report to describe their definition of mattering. Students responded with a mix of service- and instruction-based responses, indicating that they did not compartmentalize these areas but, rather, viewed their experience on the whole. I sorted the responses based on whether comments specified services or instruction so that I could focus on comments regarding services specifically. Table 30 shows the number of students who responded to each question and the volume of service- versus instruction-based answers. Instruction-based responses included references to the instructor, instructional strategies, and curriculum planning.

Table 30:

Number of "best", "worst", and "matter to UNM" responses analyzed

Responses	No. of "Best"	No. of "Worst"	No. of "Matter to UNM"
Total responses analyzed	102	90	93
Total service-based	50	42	54
Total instruction-based	52	48	39

Table 31 illustrates the categories that emerged from the analysis of students' "best" and "worst" service experiences. Several categories were repeated between the "best," "worst," service-related and instruction-related groupings. Responsiveness, accessibility of classes and services, helpfulness, convenience, supportiveness, technical issues, structure of the course, and connecting with others were categories that emerged from this analysis.

Table 31:

Categories – "best" and "worst "service experiences

Categories for "Best" Experiences	No. of Responses
Service Related (total):	*50*
Responsive	13
Accessible	11
Convenient	5
Helpful	21
Instruction Related (total):	*52*
Convenient to take classes online	27
Structure of the course	9
Instructor Supportive	11
Make Connections with instructor/other students	5
Total	*102*
Categories for "Worst" Experiences	
Service Related (total):	*42*
Technical issues	11
Service not available for online students	6
Lack of community	4
Process Issues	7
Unresponsive	11
Wrong Information	6
Instruction-Related (total):	48
Lack of online classes	11
Structure of the course	16
Instructor Unresponsiveness	15
Total	*90*

I sorted the "mattering to UNM" responses by whether they conveyed overall positive or negative sentiments, then continued the open coding process to identify categories across all three responses. The number of responses for each of those perspectives is shown in Table 32. The categories that emerged from this final step echoed those already listed with the addition of one category based on students' various explicit statements expressing "I don't matter to UNM".

Table 32:

Categories – "Matter to UNM"

Categories	Service Related	Instruction Related	Total Responses
Positively Worded Response (total):	*29*	*25*	*54*
Responsive	5	4	9
Personal Attention	8	5	14
Helpful	6	4	10
Care	2	6	8
Communicate	6	3	9
Community	1	2	3
Independent	0	1	1
Negatively Worded Response (total):	*24*	*15*	*39*
Just a Number	9	7	16
Ignored	3	2	5
I don't matter	12	6	18

Converging the Analyses

I analyzed the quantitative and qualitative analyses separately, then used axial coding to converge them in order to understand what themes emerged from this study. I looked for the ways in which the different types of data supported each other or not. For example, Retention Services and Legal & Ethical Services both showed high correlations with other services and the mattering and service correlations, but there were no explicit comments about these particular services. Conversely, many students commented positively and negatively about Academic Advisement, and Academic Advisement positively correlated with other services as well as with the mattering and service correlation. I looked for this type of alignment and also the general sense of what was conveyed in the comments along with what the quantitative instruments measured. With each section, I interspersed the qualitative responses to illustrate the ways in which the two types of data connected. Four overarching themes emerged from this process: holistic view, technical support and access,

community or connection, and personal touch. Figure 5 illustrates the categories and themes that emerged through these analyses.

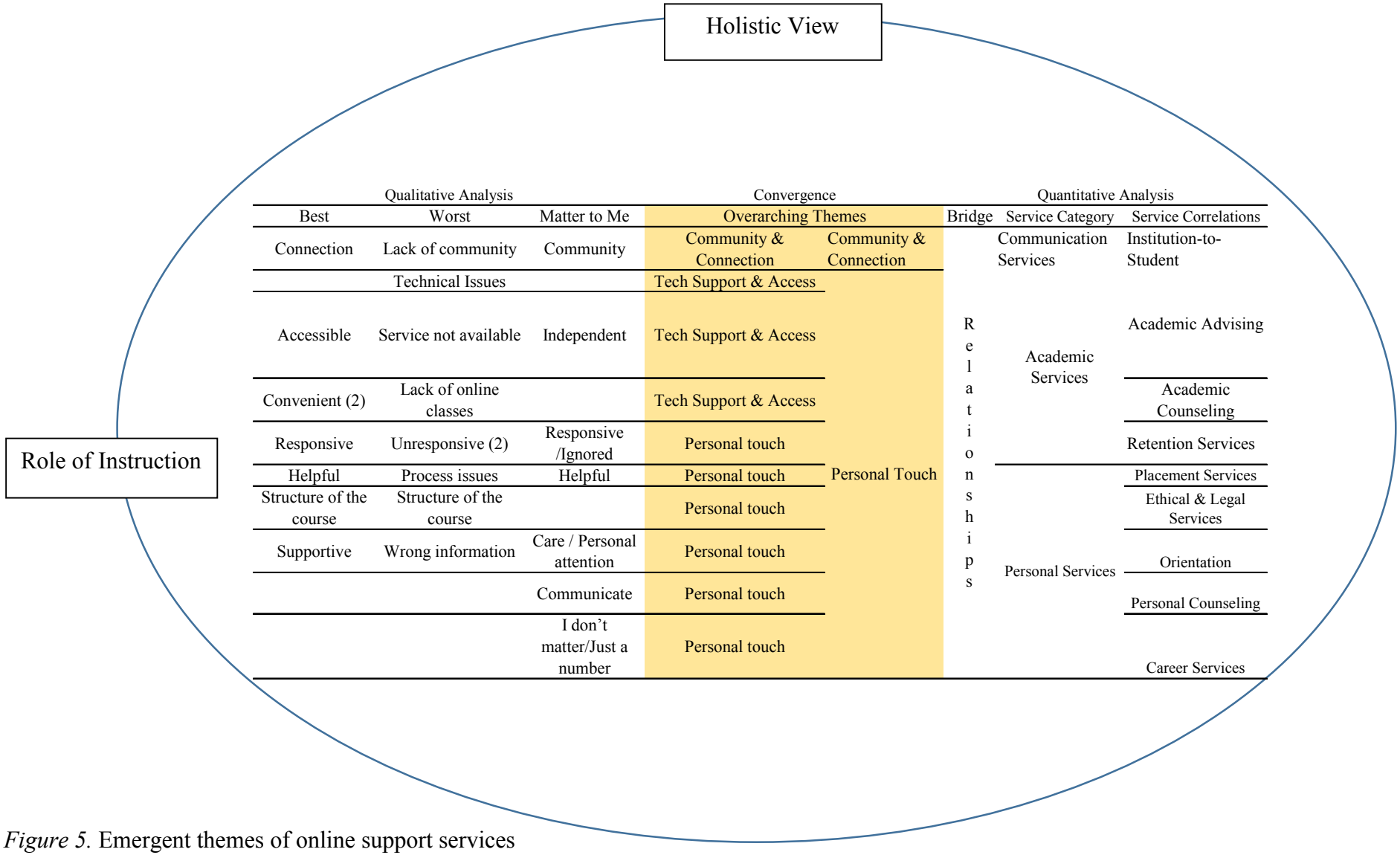

Figure 5. Emergent themes of online support services

Four Themes

Students' comments from their best and worst experiences and how they know they matter to the people who work at the university were used throughout the discussions of the use of services and mattering sections. Further comments represent the emergent categories and themes from the qualitative analysis. Helpfulness, responsiveness, and support were found in many comments. Some comments were more generalized regarding convenience and making connections. One student's generalized comment was about their overall learning experience, "I feel, as a student, that I have not been challenged to think critically about the content and how that plays out in real life situations."

Stepping back for a larger view of what these analyses presented, four overarching themes emerged. This larger view is represented in Figure 5, which will be discussed in the summary. Students take a holistic view of their online experience and do not necessarily differentiate between instruction-based and service-based interactions. In those interactions, students value responsiveness and getting the help they seek from caring individuals regardless of that person's role with the university. Online students want to feel that they are part of the UNM community through connections with faculty, staff, and each other. And, technology is the means through which their experience transpires; connectivity and access to online classes is a critical part of their experience. Each of these themes are discussed in more detail below.

Holistic view. What began initially as a frustration in my qualitative analysis actually became an emergent theme from the data. As revealed in the data, students did not distinguish between students' interactions with services within the scope of this study and students' interactions with instructors or instructional strategies. Students viewed their

experience and interactions as a whole, and did not compartmentalize their feelings of mattering to UNM with respect to services separately from their feelings with respect to their instructors. Their responses to the survey questions revealed how intertwined their experiences were, experiences which formed their overall impression as a student. My first review of the data highlighted this. I wanted to isolate and focus on their service experience from the context of support services, but many students view their online classroom experience as part of the package of services and do not separate them.

Roughly half the responses across all three qualitative questions included specific comments about instructors, instructional strategies, or about the online curriculum in general. During the next phase of analysis, I also began to identify similar categories emerging between what I had identified as service- and instruction-related. This came as a surprise to me during the initial phase of analysis because my own focus was specifically on services. However, I set my bias aside and realized that this holistic view of their academic experience was actually one of the overarching themes of my study.

Many students responded to the questions as if the questions were regarding the students' online classroom experience rather than their service experience. Responses that specifically stated comments about the instructor or instructional strategies used in the online course were categorized under the theme of "instruction related." Nearly half of the responses in both the "worst" and "best" experiences classifications were service related, which, of course, means that nearly half were not. Though the role of the instructor and instructional process are beyond the scope of this study, there are so many comments that it bears paying attention to what students had to say, especially since some categories of

qualitative analysis overlapped. Many of these comments were used throughout the discussions of the use of services and mattering.

The following comment illustrated the need to take a holistic view about the student experience.

> Some instructors do not pause to provide a chance for input from online students; some instructors forget online students are online; some instructors write too small and put more content on screens that can be displayed online; some instructors pass out material to only students physically in class; limits on scheduled classes available and satellite site not available any more - it was important for feeling like part of UNM community as you took classes with others in the same online room.

Another student expressed frustration about getting access to services:

> I tried to call the UNM ME office for information I couldn't find on the website. Not only was the phone number for the department wrong on the website, as it led to a disconnected line, the number in the university switchboard led to the same disconnected number. I then drove down to the university over my lunch break one day but since the ME website doesn't list the office hours for the ME department office, I didn't know that they were closed for an hour from 12:00 to 1:00 pm. Imagine my horror when I arrived at 12:20 pm to find that I could either go back to work or take a very long lunch since it is a 20-minute drive from where I work.

Another student wrote about their worst experience:

> Mostly the instructors but also the availability of some classes. Online classes are meant to be more flexible than those that are taken on campus. I've experienced really

> bad class planning in the last year that has resulted in me having to take time off of work to attend an in-person class.

Another student wrote this story:

> For one of my online math classes the final was proctored and to be taken at the MaLL and the testing times offered there interfered with other classes and my work schedule at the time, they would not work with me at all- 'rules are rules' is all they would say. I had to miss another class in order to make their time frame, and then did not even take a quarter of the time they required you to be there before closing- which they would not let before because I was 'too close to closing and couldn't finish it quickly enough' even though I promised to be done before then, and if I wasn't I would submit it before being finished in order to not keep them after closing time.

Technology support and access. These are online students for whom technology is critical for their online learning experience. Technology support and access emerged as another way in which services contribute to students' feelings of mattering. Navigation issues, not knowing how to use certain technology tools, and connectivity were all critical aspects of online learning. Quick resolution of problems relative to these issues was also critical. One student summarized, "I can't think of a bad experience taking online classes that was directly related to services. The most common issues were technical, which were always resolved." Other students commented about their best experience, "IT is super great, they are so patient when called upon to help," and "almost instant help with a pressing technology issue." Technology Support was reported as fairly well used and 92% of students who used the service also rated it as helpful. Though Technology Support was a service with low

correlation to other services, it is also so fundamental to the online learner that it must recognized as a foundational need.

Technical issues emerged in relation to navigation such as “Getting lost in the learning management system and not having a response from tech support” or “In the beginning, not knowing where to find assignments for one of my classes.” Other technical issues were about connectivity and the instructor’s response to it, “When they were having technical issues on campus and we kept getting kicked off. The professor's response was 'it is recorded, you can watch it later' I don’t have time to watch a 2.5 hour class a second time.”

Other comments from students referred to overall accessibility to online classes. One student commented:

> The main reason why I took online classes was because I have children and I needed my classes to be flexible. It isn't easy for me to leave home, have to drive 30-45 minutes down to the UNM campus, search for a parking space, pay a parking fee, and then at the end of the class (I normally take night classes) walk in the dark by myself to my car. So, the best experiences I had with online classes was the fact that they were offered as an alternative. It allowed me to obtain an advanced degree!

Students also commented about a best experience in general regarding access, “Flexibility in scheduling, no need to be on campus to receive support, and convenience of meeting with people online,” “Online options allowed me to stay enrolled when I did not have a flexible work schedule,” and “The lack of classes offered for my degree. I work full time so online was my only option but I’m at a point now that I HAVE to take classes in the classroom.” The ability to take online classes and having fast and reliable access to support

technology needs was expressed throughout the students' comments and emerged as a contributor to students' feelings of mattering at UNM.

Community or connection. Students commented that the connection they have with faculty, advisors and other staff, and with other students was an important part of their overall experience. Schlossberg's (1989) definition of mattering I adopted for this study is the belief of perception, correct or not, of being important to someone or something. This theme distinctly reflects students' comments regarding feeling that they are a part of something outside of themselves, to be part of and to feel they are important to someone or something. A student reported, "The best experience I had with the on-line courses was being able to have discussions with students from other campuses" and "my fellow students trust my experience and judgement."

One student commented about the online experience, "The online courses offered in the OILS Department were very good. And even though they were online, I felt very connected with the individuals that administer this program. They are the most practical courses I took." Another student wrote, "I've had teachers that go out of their way to connect with students, even though it is in an online classroom."

As previously discussed in the analysis of mattering section, many students explicitly expressed that they did not think they matter to people who work at the university. Students explained, "I don't feel like my presence at the university matters to the overall community at UNM. I feel I have been ignored on occasion when I have run into issues, and have been treated rudely" and "I don't feel like I matter to the people who work at the university. No one has ever gone above and beyond to assist me or guide me or help in any way unless I reached out first."

Several students expressed explicitly feeling like a number as mentioned in the mattering section. Other students expressed vague notions of mattering connected to salary, such as this student's comment, "If it weren't for the students, they wouldn't have a job. So I guess I'm important in that way." This student said:

> I pay their salaries and they might or might not have personal satisfaction on having to teach in order to achieve their goals ie Grad teaching. So many enjoy the process and others are completely self-serving and could care less of my learning.

One student reported a negative experience and being labeled part of a community they did not want to be associated:

> being accused of cheating by a graduate student and faculty for an online Psych 105 class I took in Spring 2016 -- many students were identified as potential cheaters because we/they were performing very well on online quizzes.

This student's words support the idea that if one feels connected with people at UNM they would not feel left alone to figure things out:

> People not helping or answering questions when I would need help. Instead they would send me around in circles to get what I needed and in the end I normally would not find out what I was looking for. I felt that my success was not important and I was alone in figuring things out about where I need to go and what I need to.

Personal touch. Students expressed that it matters to them that they matter to faculty and staff. They expressed the positive impact of being helped when they sought help, of being treated respectfully with care and concern. Examples of this were expressed throughout the student responses and in the discussions of the qualitative data. Gutek (1995) explained that customers and providers want to make encounters a positive experience. Customers want

fast, reliable service that is responsive and accurate and is delivered with empathy. For providers, a positive experience is one that is fast and efficient because they take a minimal amount of time, have relevant information available, are forthcoming with information, and allow the provider to complete this transaction and move on to the next. Eight services tending toward relationship-style interactions and functions correlated at moderately with students' feelings of mattering.

Issues with communication and responsiveness emerged such as "It is actually now as I attempt to graduate. Faculty communication has become slow to non-existent and the new advisor does not seek advice to solve problems. Several of my cohort have been impacted." Other students wrote about worst experiences, "When you need advice & people ignore you" and "Getting no feedback is the worst. Having a non-responsive instructor is really frustrating especially when they will not respond to questions or even grade any assignments." These students expressed, "one professor did not provide any feedback all semester and grades were not posted until the very end" and "I believe that as an online student I don't matter to the people at UNM."

Many comments were about responsiveness such as, "I have gotten some quick responses to questions asked" and "when I finally get someone to help me, they always help out completely. Convenient." Some comments focused on support from instructors, such as "As an online student there are some professors that take time out of their way to ensure that I am able to take advantage of some of the services by offering them to me online," and:

> It is always helpful when a professor is willing to work with my schedule since I work full time. I have in the past been able to schedule phone discussions related to

my assignments. One of my professors would coordinate with my schedule to help me with any questions or concerns I had related to the class.

These students said, “A math advisor helped get my math class from a different school transferred and accredited correctly, very nice and responded quickly after my own advisor was too busy,” “the advisors at the college of nursing are kind and patient. They are always prompt and available to me,” “My mentor for the McNair program. Her commitment to my forward progress and academic success was instrumental in my success at UNM,” and “When I needed to speak to my advisor. He was always available to assist me. I appreciate his help and it's what helped me continue with my program and graduate.”

Receiving personal attention was how this student expressed they know they matter, “My teachers and academic advisors show a genuine interest in how I am doing, and how I am progressing academically.” Another student wrote about caring instructors, “Instructors have consistently told me they care about my career as a teacher and the students I will impact in the future. These professors have faith in my abilities and trust my choices.” This student knows they matter when they seek help and get it, “Just because they take the time needed to assist me. They return my calls and emails promptly and are capable of helping me, which they always do.”

Attributes of students’ positive comments emerged as categories for this section: responsiveness, attention, and being helpful and caring. Students wrote they know they matter because “They take the time to meet with me, when I request an appointment,” “I have always been treated kindly and my questions are always asked in a clear and concise way,” “Everyone I encountered was very helpful and listened,” “They ask me how I am doing,” “They respond to me within a reasonable amount of time when I seek assistance from

them," and "They are helpful and want me to succeed and have a positive experience." Other students reported, "I have a few people within the service community at UNM who have been personally invested in my journey. They work through the Women's Resource Center" and "They are polite and gracious and willing to help me out."

Summary

When asked to describe how they know they matter to people who work at UNM, one student wrote, "Sometimes it is difficult to see if that is true." This vague and wistful comment suggested a desire to feel they matter to UNM.

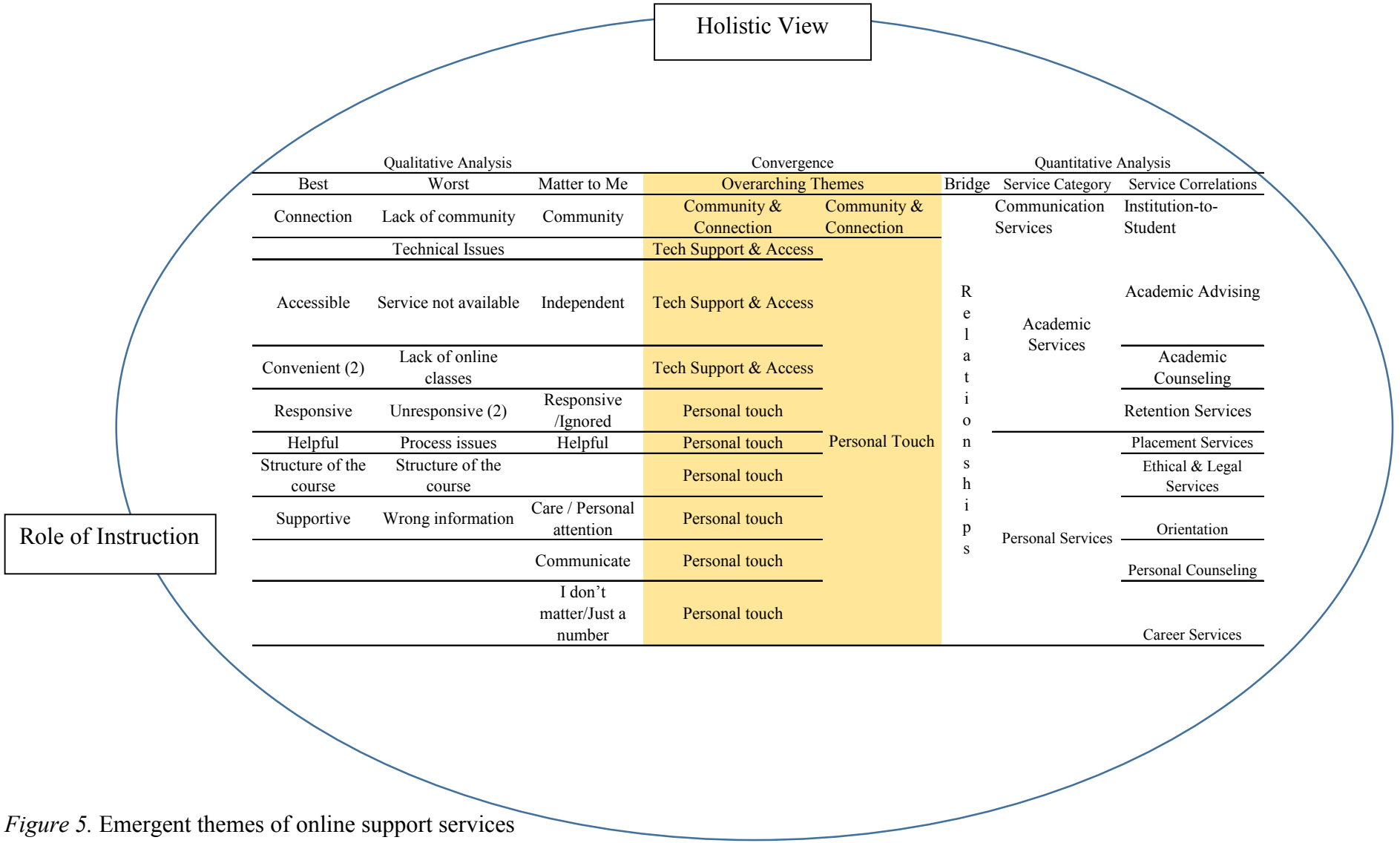

Figure 5. Emergent themes of online support services

Again, Figure 5 shows the convergence of themes that emerged from my study. One of the overarching themes is that students take a holistic view of their online experience that includes both the service and instructional environments. In the figure, the concept of the holistic view and the role of instruction encircles the students' responses to both the qualitative and quantitative responses as well as the four overarching themes that emerged, one of which is holistic view. Both "role of instruction" and "holistic view" are on the circle because the role of the instructor is an integral aspect of the holistic view students expressed. Though the role of the instructor was intended to be beyond the scope of this study, students expressed otherwise. However, since the role of the instructor is not the focus of what I measured in my study and is important nonetheless, it is identified here but only addressed within the context of students' use of services and their feelings of mattering.

Within the circle is a table illustrating the emergent categories from the students' qualitative responses. The middle columns represent the convergence of the qualitative and quantitative data and resulting overarching themes. The last three columns represent findings from the students' quantitative responses. The figure is best viewed as starting at the edges and moving inward toward the center convergence columns.

The first three columns on the left list the categories from the students' qualitative analysis labeled "best," "worst," and "matter to me." The three groupings had common categories between them from which three more themes emerged: community and connection, technical support and access, and personal touch, shown as the first convergence column.

On the right side of the figure, the last column lists the nine services that correlated between the use of services and students' feelings of mattering. As students' used these nine

services, they experienced feelings of mattering. Using the WCET "spider web" of services framework (Shea & Armitage, 2002), the categories from where each of the nine services derived are listed in the second column from the end. The service categories are communication services, academic services, and personal services. These service categories represent services in which there is more of tendency toward relationship-style interactions (Gutek, 1995). Relationships or relationship-based interactions bridged to summarize the quantitative data and map to the qualitative data, represented by the third column from the end labeled "bridge".

The center columns are important as they represent the convergence of the students' responses to both the qualitative and quantitative data. Within the center columns, the left shows what emerged from the qualitative analysis and the right shows what emerged from the quantitative analysis. Interestingly, technical support did not correlate with students' feelings of mattering in the quantitative analysis, but was often expressed by students in their written responses. The convergence shows how students' responses captured through different data collection and analysis methods support, illustrate, and illuminate each other. Personal touch and community & connection were themes that emerged in both the qualitative and quantitative responses. Comments regarding services and the role of instruction were woven throughout the qualitative responses highlighting the nine services that emphasize relationship-based interactions. These services moderately and strongly correlated with feelings of mattering which also highlights personal touch and connection with others.

The use of services analysis showed students' usage of services offered at UNM and how students viewed their usefulness. The quantitative mattering analysis showed that only

1/3 of students feel they matter at UNM. Qualitative responses yielded comments of students expressing ways in which they did and did not feel they matter with slightly more responses indicating they did not feel they matter to people who work at UNM. The mattering-to-services correlation revealed nine services that correlate at least moderately to students' feelings of mattering. These nine services share a common thread of being personalized, relationship-style interactions. Qualitative responses provided reflections of service through students' descriptions of their best and worst service experiences. Students also described how they know they matter at UNM or expressed that they did not feel they matter at all. Four overarching and interconnected themes emerged from the data. Students view their experiences holistically whether their interactions are with services or with instructors. Students gauged their sense of mattering based on responsiveness and helpfulness from caring staff who often go above and beyond to help. Students also knew they mattered when they feel a sense of connection with the UNM community. Since technology support and access was a critical mechanism through which these experiences occurred, this is also an impact on online students' feelings of mattering at UNM.

Chapter 5: Conclusions

Introduction

This chapter expresses the significance of the four major findings that emerged from this multiple methods research and how well these findings answered the research questions. Each of the four themes will be discussed with their implications for theory, practice, and future research. Support services for online students is one avenue in a complex picture in which institutions can effect a relationship-type experience with students. Through service- and instruction-based interactions, the institution can connect with students, to provide a sense of community and belonging for online students, at UNM.

Certainly, not all students perceive that they need or want much interaction with services. When asked to "describe how you know you matter to the people who work at UNM" one student responded, "I'm not sure. All I really need as an online student is the independence, flexibility, and necessary resources to complete my work. I haven't put much thought into if the people at the university think I matter to them." Services, and the degree to which students access them, help to provide an environment where students can experience independence, flexibility, and have the necessary resources to complete their work. The point of providing services is to ensure that students have access to resources they may or may not need in order to meet their academic goals. Online students have the added complexity of not being physically present on campus to partake of services that on campus students can readily access and may not even know that such services are available. My study examined online students' use of services and the relationship to students' feelings of mattering to UNM.

The Instructional Technology Council reports that "providing adequate support services for distance education students emerged as the number one challenge" for distance education (Lokken & Mullins, 2013, p. 10). The four themes that emerged from this study offer insight into how UNM can relate to its online students through its service offerings and interactions. Students view their online experiences holistically, which suggests that UNM might better serve its online students by taking an integrated approach to service- and instruction-based interactions. By interacting in caring, helpful ways, providing a personal touch through service interactions, UNM can provide an avenue for students to connect with the institution and each other, supported and accessed through technology.

Summary of the Study

Each contact that students have with faculty or staff is an opportunity for the institution to be helpful and supportive, and to create positive interactions (Crawley, 2012; Raisman, 2009, 2013). The students who participated in my study would certainly agree with this sentiment. Students enrolled exclusively in online classes during the academic year 2015-2016 were invited to participate in a 3-part survey asking them to rate their use of services, their feelings of mattering to UNM, and to provide stories about their service experiences at UNM. Using this convergent parallel research design approach to collect and analyze responses to quantitative and qualitative questions, I provided a description of online students' use of support services and their feelings of mattering to UNM.

Four overarching themes emerged from the analysis of the students' responses. First, students view their experience holistically. When asked questions specifically about support services at UNM, students provided responses that pertained to both the service and the instructional environment, not differentiating one from the other. About half of the responses

were focused on services while the other half was about instructors and their instructional experience while taking online classes. This blending of service and instructions portrays the students' view that service and instruction are intertwined, not separated, and therefore UNM should also view the student experience through the lens of this blended approach. The holistic view encompasses convenience, flexibility, effective processes, accessibility, and helpfulness.

Another theme that emerged is the role of technical support and access. Online students, of course, rely on technology in order to pursue their coursework and want these classes and services available in the online format. However, the bigger picture of these common comments from students is that technology support and access also impact their feelings of mattering to UNM. Students expressed that they want more selection of online classes from which to choose and they want to access services through remote means. Students also appreciated getting quick resolution to their technology issues whether it was connectivity problem or trouble with using particular software. Being able to take online classes and to resolve issues associated with using the technology is important to them and positively impacts students' feelings of mattering to UNM.

Community or connection was another theme that emerged from the analyses of student responses. Many comments reflected the importance of staff and faculty who helped and supported them. Communication was a fundamental way that students perceived as keeping them in contact with UNM. They appreciated emails and information as well as being asked their opinion through conversation or surveys, for example. Their comments expressed they appreciated that someone was looking out for them, noticing if they were missing assignments for example. Some students mentioned particular student programs

through which they had developed a sense of community, or the lack of being able to find one through which to connect.

The final theme that emerged from students was the importance of personal touch in their interactions. Students wrote stories about how staff or faculty had gone above and beyond to help them. Of course, students wanted help when they asked for it and they wanted that help to be useful, but students expressed that the connection they experienced during those interactions made them feel that someone cared about them. Again, helpfulness, providing support, caring about the students' situation and taking it upon themselves to reach out to other staff and faculty on behalf of the student were ways in which students expressed that getting that personal touch made a difference for them. It was not just stories from students that portrayed this sentiment. The analysis of their quantitative responses revealed nine services that correlated with students' feelings of mattering at UNM. The commonality of these services is that they tend to function through relationship-based interactions, further suggesting that students' feelings of mattering is impacted through relationships and personal touch.

These four themes have distinct differences and yet they overlap and connect with each other. From a holistic viewpoint, they should. The findings suggest that through relationship-based interactions, students perceive that staff and faculty care about their issues providing a personal touch in their service interactions while getting effective resolution to issues or questions. Furthermore, through these interactions students feel a sense of community or connectedness and, overall, have a positive online experience at UNM.

Obtaining Answers to the Research Questions

I embarked on this research project to understand the relationship of student support services with students' sense of mattering for online students attending UNM. I chose a mix of quantitative and qualitative methods approach in order to provide multiple views of the case and to discover how each set of data supported the other. I discovered that there is a relationship between students' use of services and their feelings of mattering to UNM and that students' intertwine their instructional and service experiences. Services did contribute to students' feelings of mattering and, in particular, services in which students have relationship-style interactions.

Through this research, I answered the sub-questions as well. The comprehensiveness of the WCET "spider web" framework allowed students to portray the services they used, how they rated their usefulness, which format they used to access services and reasons why they did not use the services. Students used the full range of services presented and, in general, found them to be useful. The use of many services, such as those under the Administrative Core, were musts in order for students to take their next steps while other services used based on student choice, such as Student Communities and Personal Services, were also used. This wide use of the array of services and their usefulness illustrated that students will take advantages of opportunities and resources, especially when they are helpful. I discovered that a statistically significant positive relationship did exist between students' feelings of mattering and their use of nine support services: Academic Advising, Academic Counseling, Retention Services, Institution-to-Student Communication, Placement Services, Ethical & Legal Services, Orientation, Personal Counseling and Career Services. All of these services offer relationship-style interactions with perhaps the exception being

Institution-to-Student Communications. Some services, such as Retention Services and Ethical & Legal Services were not widely used but have a very strong impact on students' sense of mattering.

Students expressed positive and negative interactions with services that impacted their sense of mattering to the institution. The study also revealed how their interactions with faculty impacted their sense of mattering even though the questions were asked about services, not instruction. This blending revealed that "service" has meaning for students regardless of the role of the person providing it. Instructors provide service too. When asked about their service experiences, students provided their whole view of service. Thus, the combination represents the holistic view that students have in viewing their service experience.

My study was unique in that it examined the relationship between online students' use of services and their feelings of mattering. The need for comprehensive services to support online students has been studied. The role of support services and their connection with student engagement has been studied. Students' feelings of mattering within the context of higher education has also studied. However, my study is the first to connect support services and mattering in higher education specific to online students.

Discussion of Relevant Themes

Four overarching themes emerged from this study. Students responded to the survey from a *holistic* viewpoint, intertwining their service- and instruction-based experiences even though the survey asked questions specific to their experience with services. Examining instruction and the role of the instructor was beyond the intended scope of this study, but turned out to be intricately linked with students' perceptions of their interactions with UNM.

Distance education students rely on *technology support and access* as the vehicle for their academic pursuits. Online students expressed their value of *personal touch* in their interactions with staff and a desire for a sense of *community and connection*.

Holistic view. The holistic view that students presented is important because it represents the need for institutions to respond to service needs with an integrated philosophy and approach to online education. Students did not separate or delineate their interactions between those that are offered through student-oriented, staff-based support services and services that are offered by instructors through the instructional process. This suggests that institutions should take an integrated, holistic view with how they approach students and interact with them. Providing quality service should be imperative regardless of what specific role a faculty or staff play in the life of the institution. What this means in practical terms will be discussed further in this chapter.

Students responded to questions about services by giving examples of their interactions with both services and instruction, presenting and intertwining both of those perspectives. In fact, nearly half of all the qualitative responses referred to instruction-based services without differentiating them from support-based services. Through these responses, students reflected that they want responsive, helpful, caring "service" from both service-specific areas and from their instructors.

Even one experience can leave a lasting impression with students as this student reported, "when I get academic advising - I was really treated disrespectfully one time. They had canceled my appointment and no one notified me and I went there for advisement and no one wanted to see me. I felt she was completely discriminating against me as a minority woman." Another student stated, "I was once lost on campus trying to find a certain office.

An employee riding around in one of those little carts could tell that I was lost and gave me a ride to the building where I needed to go." Positive or negative, these encounters left lasting impressions.

The holistic view and associated integrated approach is supported through the review of literature found in chapter 2. Tovar (2013) outlined contributing factors to student retention. These factors included institutional commitment to students, mattering, sense of belonging, interactions with diverse peers, perceptions of the campus climate, engagement/involvement, socio-academic integrative experiences, and goal commitment collectively affected students' intent to persist to degree completion. These factors also represent a holistic, big picture view of the student experience. Tovar's work demonstrated that mattering to the institution exerts a moderate to strong influence on community college students' engagement/involvement, socio-academic integrative experiences, sense of belonging, and indirectly on intent to persist.

This student's comment summarizes the holistic view and the need to take an integrated approach with services and instruction:

> The worst experiences have been watching the lecture, and the professor is at the board, writing and drawing on the board and pointing at things, but the camera is pointed at the slides and you cannot see what the professor is doing. Another scenario is the opposite, when the professor, is at the slides, pointing to material in the slides, but the camera is pointed at the white board. So essentially whenever you cannot see what the professor is pointing at or talking about. this is a major disadvantage for an online student. Also there have been a few lectures where the professor lectured

beyond the scheduled time, and the recording just stops. So you basically miss out on the last few minutes of the lecture, which could be really important.

The student development theories outlined through Long's (2012) families of student development and Kuh, Kinzie, Buckley, Bridges, and Hayek's (2006) theoretical perspectives on student success discussed in chapter 2 mirror the concepts of the holistic view of the student experience. The student development theories support the findings of the student in that they discuss identity development, how students interpret and assign meaning, and promote conditions for heathy growth and development. The correlation analysis identified nine services that students identified as those which promote their feelings of mattering to UNM. These services represent relationship-based arenas for students to learn about themselves, develop perceptions of meaning, and that provide an environment for students to develop.

Long's psychosocial theories relate to how people develop over time and includes theories related to students' developing identity. Relationships with faculty, staff, and other students help students to connect with the institution and with each other, developing community and providing a way for students to view themselves through the eyes of other people. In this way, as they develop their own identities, they also develop an identity with the university. Services that promote these interactions will impact students' feelings of mattering.

Cognitive-structural theories help explain how students interpret and assign meaning from their experiences. As students interact with the institution, they formulate perceptions and assign meaning to them. Students expressed through quantitative and qualitative means that their interactions with the university impacted their feelings of mattering in both positive

and negative ways depending on the nature of the interaction. “While a number of factors influence a student’s decision to persist or dropout, it will become increasingly important for online program administrators to control institutional factors that support student participation and success” (Tello, 2007, p. 60). A holistic viewpoint considers that all interactions facilitate the development of these perceptions and that institutions have a role in shaping them.

Humanistic-existential theories emphasize the conditions for healthy growth and development and focus on relationship to others. Person-environment focus on the impact that higher education has on the student and how individual characteristics of the student interfere or help with the students’ development. Kuh et al. (2006) categorized the student development theories differently, but the concepts are same and have implications both in service planning and for students to connect with each other and the institution. All of these theories have implications for service planning and will be discussed more in that section.

Technical support and access. Technology is the foundation through which online students access instruction and service. Providing online classes, degree programs, and support services with effective practices that resolve arising issues is imperative for UNM’s online students.

I grouped technical support and access together because both point to effective technology as a fundamental resource for online students. Since the students who participated in my study were enrolled exclusively in online classes, getting technical issues resolved quickly was of critical importance, as this student commented, “Being shut out of online services abruptly in the midst of trying to complete an assignment. This sort of error is just unacceptable in an online class setting.” Of course, getting shut out of an online service can

be rooted in many causes and the student did not provide enough information as to why they were shut out, but if it was a connectivity issue under UNM's control, I agree with the student that it is an unacceptable experience for UNM's online learners.

It is challenging for institutions to not only provide comprehensive and effective services (and classes) but to also find meaningful ways to connect the student to those services (Crawley & Fetzner, 2013). The other aspect of this theme relates to having online classes available. Students wrote, "Online classes were convenient for me which is the only reason I stayed at UNM" and:

> As an online student there are services available but most of them are only available on campus and they are usually closed by the time I get off of work. I have no option to miss days because I have had to take off for a medical condition so I haven't been able to use the services since they are not available with my schedule.

The economic perspective of student development theory outlined by Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) identifies Braxton (2003) as a major contributor. His theory posits that if students perceive the costs of participating in an activity outweigh what the student expects to gain by participating, they will leave school. Considering access, some students do not appreciate paying the technical fees associated with taking online classes at UNM. One student wrote, "Having to pay $100 extra because the classes are online is a pretty bad experience." It is unlikely that the technology fee can or will be changed or eliminated, but the fee could be an obstacle to distance education for some students who cannot afford such fees. Kember's (1989) model of dropout from distance education, however, also has a cost-benefit component. From Kember's perspective, the higher a students' commitment to academic goals the less likely the student will be impacted with a

cost/benefit analysis. Helping students to set and achieve goals through services such as academic advising or personal counseling may counteract the cost/benefit effect. As students perceive the benefits of accomplishing goals, the cost becomes "worth it" to pursue. Relationships with staff and faculty promote the accomplishment of the goals. Students acknowledging and being acknowledged for accomplishing goals they have set may not consider paying an extra $100 for on online class to be a bad experience.

Community or connection. UNM provides myriad opportunities for students to connect with staff, faculty, and other students to collectively form the UNM community. These opportunities should be extended to the online student population as well.

A student reported that, "The initiative to start an online student club was encouraging but unfortunately it did not happen this semester and I am now graduating." While many students commented about connections they made with faculty, staff, or students or the desire to feel part of a community, this comment illustrated a specific action that could potentially help students feel connected to UNM. Connecting with others and having a sense of community promotes student involvement in activities. Students who are more involved in collegiate academic and social activities are more engaged with the university and are more likely to persist in college (Tinto, 1993). And, the more students are involved in activities and events on campus, the more likely they are to be academically successful because access and utilization of programs and services stimulates learning (Astin, 1999). Factors that contribute to student retention include mattering, a sense of belonging, interactions with peers, institutional commitment to students, perceptions of the campus climate, engagement/involvement, socio-academic experiences, and goal commitment impact students' intentions to persist (Tovar, 2013).

In the survey responses, several students commented about interaction with faculty, staff, and other students. One student wrote,

> As an online student, you don't get very much interaction other than your instructor and interactions with students for group work. I've been online for several years and no never have I received an email to ask if someone could be of more service to me or inviting me to come to main campus to meet with their office....to maybe do a pulse check, LOL, just kidding...but seriously, having that interest to learn more about the student's career path, is there a mentor they could be connected with for some short period of time.

Student development theories, outlined in chapter 2 and discussed in the Holistic section of this chapter, provide a basis for understanding students' need for connection and the universities' role in planning to meet those needs. Considering Long's (2012) families of student development again, theories related to students' developing identity also relate to how people connect with one another while in school and later as they enter the workforce. The connections that students have with staff, faculty, and other students help to shape their ideas, experiment with concepts, and to explore tangible application of ideas through interactions with others. Specific student groups help to shape this. One student commented about the initiative to start a student community specific to online students. Through a group such as this, students could share experiences that are unique to the online experience, thus shaping their identity not only an online student but as a college student and later as they exit the university in pursuit of career goals. Students expressed that they want to feel part of the university community and that those connections impact their feelings of mattering.

Cognitive-structural theories help explain how students interpret and assign meaning from their experiences. These theories support activities related to the university community and involvement in the community at large. Students expressed how they know they matter at UNM which illustrates an attachment of meaning to their experiences. Through these interactions, students develop perceptions about the person with whom they interact as well as the students' own sense of mattering in that circumstance as well as to the university. Students expressed specific situations, departments, and individuals with which interacting made the students feel they matter.

Humanistic-existential theories emphasize social wellness. The correlation of five out of nine services that correlated with students' feelings of mattering were Placement Services, Ethical & Legal Services, Orientation, Personal Counseling, and Career Services. Each of these services are focused on student personal wellness and function through relationship-based or pseudorelationship-based interactions. While these services focus on the students' health and wellbeing, the use of them positively impacted students' feelings of mattering.

Person-environment theories focus on student involvement in activities and events associated with the institution. The theories and student development perspectives that Kuh et al. (2006) identified are directly tied to building the community or having a connection with others. The sociological, social networks, and cultural categories all related to shaping the students' beliefs about themselves and the world in which they live. Students expressed repeatedly that connecting with staff, faculty, and other students increased their feelings of mattering to UNM. Engaging students through relationship-based or pseudorelationship-based interactions, developing communities through which they can connect and feel part of

the UNM community should positively impact their feelings of mattering. Again, all of these have implications for service planning and will be discussed more in that section.

Personal touch. Providing personal touch in encounters with online students could promote a sense of mattering and a connection to the university. Online students want to interact with staff and faculty and they want to interactions to be positive, responsive, and personalized to their needs. Many adjectives can be used to describe how students characterize what they appreciate and what they seek: helpful, caring, respectful, convenient, flexible, supportive, kind, friendly, and welcoming. In essence, students want to be treated like they matter. "The key to retention is providing good customer service to the customer" (Raisman, 2008, p. 17) which means "treating students and one another as if they have enduring value and importance" (p. 20). Services that provide relationship-style encounters with personal touch for online students help to promote students' feelings of mattering.

Students felt like they matter at UNM when people were responsive to their needs, providing useful and helpful information, conveying a sense that they cared about the student. Students' comments interspersed throughout Chapter 4 conveyed that what students experienced in their positive interactions was much more than simply seeking help and getting it. Students got help, got issues resolved, and it was done in a patient, caring, responsive, and helpful way. Help was provided with personal touch. Students commented, "I have an educational goal and when my instructor takes time to chat on my interest, provides feedback and gives some direction with career paths, I think that makes a huge difference to know you matter." In response to the question asking students how they know they matter to people who work at UNM, this student wrote:

> I think I have to say I don't know. I get reminders and everyone is helpful. The thing is, nothing feels personal. To say a different way, anyone would receive the same treatment and such in my shoes. It has nothing to do with me at all. As such how can I really measure how much I mean?

Many of the comments expressed by the students specifically mentioned that they felt staff or faculty took an interest in them, seemed to care, were proud of the students' accomplishments, and that the students' efforts were noticed and appreciated. These are also characteristics of staff and faculty giving a personal touch in their service interactions. In fact, students' comments were filled with the same or similar words Schlossberg (1989) used to define mattering. These particular comments directly support, align, and affirm France's (2011) mattering scale and Schlossberg's (1989) mattering constructs:

- Attention – the feeling that one commands the interest of another
- Importance – the belief that someone else cares about what we do or think
- Ego-Extension – the belief that others will be proud of our accomplishments or saddened by our failures
- Dependence – the belief that others "need" us
- Appreciation – the belief that our efforts are appreciated

I chose to develop emergent coding when analyzing the qualitative data, but results suggest that I could have used these constructs as predetermined codes. Many of the qualitative responses would have aligned with this coding schema, though not all. In this way, the qualitative results support the theoretical constructs that comprise mattering theory.

The other side of Schlossberg's (1989) mattering theory is marginality. Marginality means that people feel they do not command the interest of another; do not believe that

anyone cares, thinks about, is proud or saddened by what they think or do, or that their efforts are appreciated. It is the opposite perception of mattering. Schlossberg (1989) also explains that feelings of mattering can occur when students take on a new role, especially if the student is uncertain about it. For many, transitioning to being a student can be challenging. Doing so in the online environment can be an added challenge for those who feel isolated. I concluded that comments expressed by students who responded to the mattering question with variations of "I don't" felt marginalized. Based on students' comments about mattering it is reasonable to think that students who are feeling marginalized and receive care and concern from faculty and staff at UNM may shift from feeling marginalized to having an increased sense of mattering to UNM.

Gutek's (1995) explains characteristics of relationship- and encounter-style of interactions between a customer and provider. Relationship-style interactions include repeated contact with a particular individual, getting to know each other, expecting and anticipating future contact, and the development of a shared history. The customer and provider develop a relationship over time. Encounter-style interactions are single, fleeting interactions that will typically occur with different providers, where the customer and provider remain strangers. In the encounter-style interaction, the providers, even though they can be different people, are expected to function similarly. In the qualitative comments, many students expressed aspects of their experience that align with the description of relationship-style interactions. Students commented about advisors and instructors helping them, of that person being fundamental in the students' ability and desire to continue in school. Certainly, having someone "go above and beyond" could create a belief or perception of being important to someone.

The service functions that correlated at least moderately with feelings of mattering were: Academic Advising, Academic Counseling, Retention Services, Institution-to-Student Communications, Placement Services, Ethical & Legal Services, Orientation, Personal Counseling, Career Services. The common thread between these services is that they involve interaction, counseling, and time spent with a staff person and constitute relationship-based interactions. Contrast this with service functions within the Administrative Core. None of the services within the Administrative Core: Financial Aid, Schedule of Classes, Course/Program Catalog, Admissions, Student Accounts, Student Records, or Registration, correlated even moderately with students' feelings of mattering. Interestingly, these services represent mandatory steps in students becoming students, and yet they did not correlate with feelings of mattering. Services within the Administrative Core, for the most part, are typically encounter-based and most students handle these functions electronically. This suggests when students engage in relationship-based interactions with people at UNM, they experience feelings of mattering.

The relationship-based interactions perhaps also contributed to the students' "collective affiliation," or quality and quantity of contact between the student and institution (Kember, 1989). Kember's (1989) model of collective affiliation includes not only student characteristics and the students' personal commitment to completing goals, aspects of social and work lives and integration with academic life, and cost/benefit analysis, it also includes the academic environment and the student's integration with it. Utilizing services that foster relationship-style interactions and where students experience personal touch as part of their experience may promote students' collective affiliation with UNM. The contacts that students have with faculty and staff are opportunities for institutions to be helpful and

supportive, to engage in positive interactions (Crawley, 2012; Raisman, 2009, 2013). The relationships also provide an avenue for students to feel noticed, cared about, needed, appreciated, and that someone is proud of their accomplishments. These are the very constructs that comprise mattering theory and therefore contribute positively to students' feelings of mattering. Together, the relationship interactions may promote the sense that, to some degree, students are a part of the university and that they matter to someone (Schlossberg, 1989). It is possible and suggestive that relationship-style interactions in the higher education setting contribute to students' feelings of mattering to the institution.

Realistically, with UNM experiencing a continuing budget crisis and hiring freeze, most departments simply do not have the staff to provide for time-consuming relationship-based interactions. The higher education environment provides a hybridized service context with a mix of both relationship and encounter-based interactions referred to as a pseudorelationship (Gutek, 1995). Fostering this type of interaction may provide the best of both worlds by providing students with the help they need with enough personal touch to feel like a relationship-style interaction but handling the interaction quickly and efficiently like an encounter-style encounter.

Implications for Theory

Mattering is the belief or perception, correct or not, of being important to someone or something (Schlossberg, 1989). My study showed at least moderate correlations between the use of nine services and students' feelings of mattering. The commonality I saw between these services was that they foster relationship-style interactions, or hybridized pseudorelationships that combine elements of relationship- and encounter-style interactions (Gutek, 1995). Students commented about the support, help, care, and concern that advisors

and instructors gave and how those interactions played a role in the students' decisions to stay in school. Again, having someone "go above and beyond" could create a belief or perception of being important to someone or something. The quantitative and qualitative data seems to support the assertions of Schlossberg's (1989) mattering theory.

The instrument that I used in my study to measure feelings of mattering, the UMUM-15, measured four constructs of mattering theory: importance, awareness, reliance, and ego-extension (France, 2011). The instrument was developed to be used as a one-factor model. In other words, the mattering scores are viewed as one measure rather than the four individual constructs that align with the constructs of mattering theory. In my study, the UMUM-15 results indicated that about 2/3 of students did not feel they matter to the institution and 1/3 did. Qualitative responses supported these results but with less of a divide and with more students expressing feelings of mattering to UNM. This could indicate further refinement of the UMUM-15, or it could highlight the benefit of using multiple methods research, of getting the best of both data worlds by combining quantitative and qualitative results.

In Schlossberg's (1989) discussion of mattering, she outlines the constructs that comprise her theory. Though they align with Rosenberg and McCullough's (1981) constructs, and adds one, and uses different language. Schlossberg's constructs include:

- Attention – the feeling that one commands the interest of another
- Importance – the belief that someone else cares about what we do or think
- Ego-Extension – the belief that others will be proud of our accomplishments or saddened by our failures
- Dependence – the belief that others "need" us
- Appreciation – the belief that our efforts are appreciated

I chose to develop emergent coding when analyzing the qualitative data, but results suggest that I could have used these constructs as predetermined codes. Many of the qualitative responses would have aligned with this coding schema, though not all. In this way, the qualitative results could support the theoretical constructs that comprise mattering theory.

As mentioned in the Personal Touch section and in this chapter, it is possible that students who responded to the mattering question with variations of "I don't" felt marginalized, the opposite feeling of mattering (Schlossberg, 1989). In my study, students' feelings of marginality were not assumed for those with a negative response to mattering. One implication to mattering theory is to determine if students feel marginalized when they do not have feelings of mattering. Again, it is also possible that when students receive personal touch from faculty and staff or feel connected with faculty, staff, and fellow students at UNM, their feelings may shift to those of mattering.

Implications for Service Planning

Implications for service planning derive from each of the four overarching themes that emerged from this study. The service implications related to all four themes could and should be viewed through a holistic, integrated approach with consideration for the needs of online students and those of the service providers, whether they are faculty or staff. However, I maintained the structure of the four themes in this section for purposes of clarity.

Holistic view. The holistic view of the online experience that students expressed invites an opportunity for UNM to also take this view and respond with an integrated approach in how service is delivered at UNM. Students reflected that they want responsive, helpful, caring "service" from both service-specific areas and from their instructors; therefore, faculty and staff should be viewed holistically as service providers. Quality service

delivery should be imperative regardless of specific roles faculty or staff have at the institution. This finding suggests customer service should be part of both staff and faculty training. To facilitate the concepts of integration and associated shift in organizational culture, the audience for the training could be a blend of staff and faculty with opportunities to share their service-provider experiences with each other. Ultimately, these components could be integrated to cultivate a culture of caring and mattering at UNM.

For students, integrating the approach means their overall experience would be improved as they experience quality service in their interactions with staff and faculty. The ideal would be that students have a seamless service experience not only as they seek answers, but also be proactively contacted to discuss potential barriers and progress. Also, ideally, the student would primarily have one person through which these important interactions take place. Minimizing the number of people to interact with allows the opportunity for the relationship to develop. Since students take many classes over time and therefore have many instructors, the integrated service approach would promote a situation where a staff person maintains the primary relationship with student and is connected with a cadre of service providers. Through these connections the primary staff person could negotiate issues on behalf of the student.

Student affairs practices and service planning are influenced by student development theories. Once again considering Long's (2012) families of student development, mentioned in the Holistic and Community or Connection sections of this chapter, these theories have implications for service planning. Considerations need to be made for online students and their needs. Services that are impacted by theories outlined by Long's psychosocial family of theories include those that help students shape their identity. The development of a

community specific for online students as was mentioned by a student as an initiative underway at UNM, would be an important step in helping students build their identity as a student, through an online community. These services not only facilitate the students' development but also connect students with others like them. These services include programming for ethnic minorities and students with alternative lifestyles and also includes career development. These services fall under the Student Communities category of the WCET "spider web" of services framework (Shea & Armitage, 2002).

Humanistic-existential theories emphasize social wellness and are represented by the Personal Services "spider web" category. Person-environment theories focus on overall involvement in activities and events to promote student academic success and stimulate learning, these are represented by the Student Communities services. UNM already has wellness, counseling, and student group services in place at UNM for on-campus students, but there are not established pathways for online students to connect with these services. These pathways need to be established. Facilitating students' access to relationship-based or pseudorelationship-based interactions so that they might actively participate in the services that already exist at UNM would promote their sense of identity within the UNM community and offer access to services they want to use and that increase their sense of mattering at UNM.

Technology support and access. Effective technology is fundamental for online students. Providing responsive support for students having navigation and connectivity issues is critical. Students reported that UNM provides these services and, for the most part, is doing it well. The implications with this aspect of the finding are for UNM to: 1) continue providing these services, in essence, to keep doing what it's doing, and 2) examine the

technical support structure and practices for online students and see what might lend itself for replication across other services.

The availability of online classes and services is important to students. Many students commented that they want to take classes online and want to have more class and program selections. Students want the flexibility and convenience that online classes and programs provide them and comment that there are not enough offerings. Some comments related specifically to services that were not developed with considerations for meeting the needs of online students. The rapid growth rate of online enrollments and the emergence of this finding suggest that now is the time for UNM to consider making adaptations to meet the needs of its online learning community. To help students identify services, UNM could modify the "spider web of services" as an interactive map through the online.unm.edu website.

Costs are a factor for students. As mentioned in the Holistic section of this chapter, from Kuh, Kinzie, Buckley, Bridges, and Hayek's (2006) economic perspective of student development theory, the costs of paying the technology fees associated with taking online classes at UNM could prompt some students to leave school if they do not also see an associated benefit with the fee. The fee is not likely to changed or be eliminated, but the implication for service planning is in communication. One finding from my study is that students' usage of Institution-to-Student communication is moderately correlated with students' feelings of mattering. Given that, perhaps institutional communication about the technology fee and what it provides students could impact some students' feelings about paying the fee. It is possible that if students have the opportunity to understand the purpose of the additional charge, the benefit could outweigh the cost.

Community or connection. A sense of community or connection is important to online students, just as it is for on-campus students. UNM provides myriad opportunities for students to connect with staff, faculty, and other students to collectively form the UNM community. These opportunities could be extended as UNM works to expand its community to embrace online students. One student's comment specifically addressed this particular issue, "The initiative to start an online student club was encouraging but unfortunately it did not happen this semester and I am now graduating." As of Fall 2016 a student club was chartered and has been started. This type of initiative is precisely the type of activity that could help create a sense of community for online students. Connections with others promotes student involvement in activities. Students who are more involved in collegiate academic and social activities are more engaged with the university and are more likely to persist in college and be successful (Astin, 1999; Tinto, 1993; Tovar, 2013).

Customer Relationship Management systems (CRM) can assist in providing information about the student in order to help address their issues more fully. While UNM already has systems that hold information about students' academic history, CRMs help to facilitate the relationship by bringing together institutional data with demographics, as well as lifestyle and other personal information. With a CRM, a pseudorelationship interaction is supported because the service provider "knows things" about the student that a stranger would not know, creating a sense of familiarity and connection that might not otherwise exist. UNM has considered this type of system for many years and may be ready to purchase and implement one soon.

An extension of CRM is Learner Relationship Management (LRM) systems that facilitate a hybridized integrated approach to student contact that includes face-to-face,

phone, and online access. The LRM takes the CRM a step further by including information about students' particular learning circumstances, such as their participation in Bridge Programs that help at-risk students transition from high school to college. This type of system could also help facilitate the connection that students seek with staff and faculty while also helping to build a sense of relationship and personal touch.

Personal touch. Implications for service planning for personal touch are in two parts: developing relationship- or pseudorelationship-based interactions and offering a personal touch attitude through all interactions. Developing service arenas to function in a relationship- or pseudorelationship-style is an institutional change, one that requires departmental agreement and participation. However, adopting a personal touch attitude in interactions is a shift that occurs at the individual level even when the impetus to do so is generated from leadership within the institution. In other words, for many interactions, faculty and staff can make simple changes to conduct the interaction with an attitude of personal touch.

Even at the institutional level, Gutek's (1995) discussion of pseudorelationships, or a blending of relationship- and encounter-style interactions, should be considered more fully for online student services. Gutek's identifies two types of pseudorelationships. Information-based pseudorelationships is one in which an encounter provider simulates a relationship with a customer based on a data base that provides information about the customer. UNM has several key databases to assist with this simulation including those that manage the administrative aspects of student records and the students' interface with those systems, systems that manage and monitor student progress toward degrees, as well as shadow databases within particular departments. In this case, the provider has information about the

customer which allows the provider to create instant intimacy with the customer. Experience-based pseudorelationships are those in which the customer has repeat experience with the provider. An example that Gutek (1995) used to explain the concept is McDonald's. Customers do not typically develop relationships with the individual providers but they do develop a sense of relationship with the organization such that customer has expectations which are consistently met regardless of location and other factors. Gutek (1995) also explains that when services are consistent across sites, it encourages customers to attribute their positive or negative experience to the organization as a whole and not to an individual provider. I suggest developing both types of pseudorelationships for online students. Information-based pseudorelationships are already in place at UNM. Now, it is a matter of fully implementing and integrating the use of these systems in a consistent, coherent fashion. This technology-based infrastructure can be the foundation through which experience-based pseudorelationships can be built. Developing a "McDonald's" approach to providing services at UNM has advantages and disadvantages. The biggest advantage, of course, is the consistency of service that customers, or students, would experience. The biggest disadvantage is that by standardizing services departments could experience a loss of autonomy, something they highly value as part of having expertise in their specialty area. However, with effective change management strategies, staff could understand that by standardizing some aspects of their service delivery process, it actually helps them to focus even more on delivering their actual specialty service.

Recalling the holistic theme and integrated approach that it calls for, implementing relationship- or pseudorelationship-style interactions and personal touch attitudes should occur in an integrated fashion. Ideally, staff, faculty, and students should plan this type of

initiative together as well and train and evaluate the outcomes together. Students have typically been eager to participate in student focus groups, especially when they believe they are contributing to overall improvements that lead to more positive experiences.

Additionally, some programs housed at the north campus health sciences center at UNM have effective ways of interacting with students by maintaining contact with them. It may be that these programs have scalable processes that could be implemented in main campus programs as well. These practitioners would benefit from having opportunities to share best practices and learn from one another.

Limitations

The scope of this study was limited to examining only the use of services for online students and their feelings of mattering to UNM. As much as I tried to maintain that scope and not include instructors or instructional practices, students included them anyway. Clearly, services and instruction are not so easily compartmentalized. A limit of this study was the scope.

The intertwining of service and instruction made me wonder if the services were not defined well enough for the students or if the instructions were still not clear even after a piloted review of them and editing. If so, this suggests that my survey design was flawed. It would be helpful to have more detail about what the students considered as they responded to their use of services. This information could be gathered through interviews. Having more detail about students' thought processes, not knowing how students interpreted the questions was a limit to the study.

Low sample size was a limitation to the study and may have impacted correlation scores. Given that the email invitation was sent to about 4200 students, ideally, the response

rate would have been higher than this study produced. I attribute the lower response rate to several factors related to timing. The email invitations were sent November 2016 with two follow up reminder emails within a two-week window to complete the survey. This is probably the worst time of the semester to ask students to do anything other than prepare for final examinations and assignments. Also, for many students, a year had elapsed between the time they were enrolled and the time they received invitation. Students may easily dismiss such an invitation since they may no longer have been enrolled. Also, I did not offer participation incentives. Better timing during the semester, immediacy of survey launch, and participation incentives may have produced a stronger response rate.

This study was a single case study design. A multiple case study approach might yield different results. Additionally, I focused on students enrolled exclusively in online classes in an attempt to isolate their interactions with services as an online student. Though limiting my sample to fit this primary characteristic fit the rationale for my study, it could also be seen as a limitation. Expanding the sample to students enrolled generally in online classes or even face-to-face classes could provide a different view overall of the role of services at UNM.

An obvious omission from this study are responses from students who opted to leave the university without completing their programs, especially those students who might claim that their use of services did or did not influence their decision to leave. Even with highly technical and detailed databases to track students, students who depart are a challenging population to reach. Even though actual enrollment information remains in the system and is retrievable, after three semesters of non-enrollment, student access to the UNM system is inactivated. This access is a primary method for UNM to communication with students.

Students may have provided the university with an alternative email address, but these are not required and may also be inactive. Mailing addresses and phone numbers may still be valid but finding that out costs time and money. This population, however, is critical in fully understanding mattering to UNM.

These limitations are presented as opportunities for further investigation.

Implications for Future Research

The findings represented by the four themes have implications for future research. These are presented together rather than by theme.

Understanding the role of the instructor in students' decisions to persist is a common theme in the literature and was intended to be beyond the scope of this study. However, results from this study also indicated that the role of the instructor in students' feelings of mattering to UNM was an important one. The methodology of this study could readily be duplicated and adapted to questions pertaining to the role of the instructor instead of services. Results of this type of study could be used to inform faculty development initiatives.

An in-depth website analysis and deeper service analysis could provide even more detail about usage patterns and met/unmet service needs. Additionally, a more comprehensive service analysis could reveal which services students considered when responding to questions about service usage. For example, not many students utilized Retention Services but that service positively strongly correlated with several other services, yet there was no other further description provided and no service with that specific title was in place at UNM. A deeper service analysis could provide insight into what services students considered.

Students expressed a desire for having an online community. An online student community is under development at UNM. Researching this community could lead to a better understanding of how to build a sense of online community, what aspects of the group contribute to students' feelings of mattering or to the overall online student experience at UNM.

Another study related to students could be to examine differences in student interactions between student employees versus students in general. Student employees are often employed in service areas and their interactions with other students may impact students' feelings of mattering or their overall service experience.

Establishing pseudorelationship-style interactions among relationship-based services could be an important step for UNM to undertake, especially determining how to foster the relationship given the resources of the institution. With that, examining the impact of the pseudorelationship with students' feelings of mattering would also be important. The role of the relationship could also be an important focus for research to determine which aspects of the relationship contributed to feelings of mattering and what aspects of encounter-based interactions also contribute to students' feelings of mattering. From the institutional perspective, researching the relationship aspect of student support could inform decision-makers on how best to utilize resources especially while under increasing budget constraints.

Formalized research with online students who were lost through attrition could be very revealing and informative, especially to know how or if services played a role in their decision and if they experienced any relationship- or pseudorelationship-style interactions. A study such as this could also focus on marginalization to discover whether students who do

not feel they matter feel marginalized, especially if it helps to ascertain what institutions might do to prevent student departure.

Further research regarding ethnicity differences could deepen our understanding of services and their delivery. My study showed that ethnicity was a statistically significant factor in students' feelings of mattering, but did not explain differences between particular groups. Perhaps a larger sample or examining these differences across different types of institutions could help determine the role of ethnicity in service utilization and in students' feelings of mattering.

Research into the differences in feelings of mattering by ethnicity, particularly between Hispanics and Whites, could lead to a better understanding of students' relationship with the institution and may reveal which ethnic groups are better served by which types of services, and what improvements could be made to reach more students. Also, further study may reveal the culture of New Mexico or of UNM is what makes Hispanic students feel that they matter more than White students feel. Further study may have implications for other ethnicities as well.

American Indian participation in studies could be an area of future research. Overall American Indian enrollment for Fall 2015 at UNM was 5.2%. The percentage of American Indian participation in my study was 9.1%. Nearly double the representation of students identifying as American Indian participated in my study than were represented in overall enrollment. The other percentages of participants by ethnicity aligned more closely with overall enrollment. American Indian study participation could be an area of future research to determine if more American Indians participate in studies overall or if it depends on the type of study and why. It could be interesting to see participation levels across different types of

institutions. It could also be interesting to determine if American Indian enrollment is higher in online classes and, if so, to see if it could be due to a desire to stay closer to home as the literature suggests.

Within UNM, a deeper look the role of majors, or majors with colleges, in students' feelings of mattering could reveal if students from different majors are also supported differently. Demographics could have a more prominent role in deeper examination of students' feelings of mattering and service usage between age, gender, and ethnicity as well.

I recommend the use of the UMUM-15 instrument in future studies because it represented students' feelings of mattering in a college setting. Since the questions are generalized, the use of the instrument could be used in many contexts. It could easily be used to examine the role of instruction or instructor and it could be used in examining student communities, the interplay of demographics and service utilization, and to check to see how changes in services are perceived.

Significance Revisited

This study was important because it linked the use of a comprehensive set of services with online students' feelings of mattering to the institution and provided useful information with which to plan, implement, or revise service offerings. The study was also important because it utilized the UMUM-15 designed specifically to measure college students' feelings of mattering. Both of these aspects fill an important gap in current research.

Not only was the actual research important, but sharing it is also important. I heard from other key administrators that it was gratifying to hear the findings and conclusions of this study because it provided validation of what they already know and it confirmed that

what they do is important for students. The study provided validation of the service enhancements that they continue to create and implement.

Summary

Due to my nearly twenty-year history as staff in leadership roles at UNM, I believed that how we treat people matters. My first intention in pursuing my research question was to better understand the role of support services in the big, broad picture of student retention. This, of course, was much too broad of an undertaking and I looked at ways to narrow my scope. Concurrently, I had a tacit understanding of mattering but did not know that it was a formalized construct. After finding articles by Schlossberg (1989) and Rosenberg & McCullough (1981) about mattering theory, I knew I had found a mechanism in which to examine services. After further investigation I found France's (2011) UMUM-15 instrument designed specifically to measure mattering for college-level students using a unified measurement. I also found the WCET "spider web" of services framework (Shea & Armitage, 2002) that provided a comprehensive list of services specifically for online students. I had interest, experience, theoretical and conceptual frameworks, and an instrument in which to measure feelings of mattering for university students.

This study has affirmed that how staff and faculty treat students matters. The research outlined in the literature review illustrated that mattering is an important factor in students' choices to stay in school or not. In my own situation, one person made all the difference in my choice to continue my academic pursuits. One advisor, a stranger who smiled, greeted me at the door, called me by name, and acted like she was happy to see me, changed my belief in myself. She presented me with a roadmap, a simple form showing me what I had done and what I still needed to do in order to become a college graduate. She did not judge me for

attending four other schools prior to that one or concern herself with what classes I had dropped. She focused on what I had, what I wanted, and how I could get there. Her attitude and confidence in me made me feel like I mattered and that I could actually complete my goal.

My second intention in doing this study is that by conducting this particular research, I have taken steps to fill a gap in existing research and contribute to my field. In my future roles I will take steps to integrate services holistically with distance education programming, affirming technology support and access, while developing connections and relationships with a personal touch. Perhaps my work will influence others to view the student experience holistically, to offer avenues of access and support, to build community or connection, and to add personal touch in interactions. After all, how we treat students matters.

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Appendix A: Student Survey

Demographics loaded automatically when student clicks link to begin. These fields represent questions 1-8.

Q9: ConsentTracy Hart (under the guidance of Mark Emmons, Ed.D., Assoc. Dean), from Organization, Information and Learning Sciences, University Libraries, is conducting a research study. The purpose of the research is to examine the relationship between online students use of support services and their feelings of mattering to the institution. You are being asked to participate in this study because you were enrolled exclusively in online classes at UNM for at least one semester of Summer 2015, Fall 2015, or Spring 2016.Your participation will involve taking a 3-part survey. The survey should take about 20 minutes to complete. The survey includes questions such as identifying which services you used and how useful they were, questions related to feelings of mattering to the institution, and open ended questions for you to explain your experience with services. Your involvement in the study is voluntary, and you may choose not to participate. You can refuse to answer any of the questions at any time. There are no names or identifying information associated with your responses. There are no known risks in this study, but some individuals may experience discomfort or loss of privacy when answering questions. Data will be stored on the UNM-IT survey server under UNM-IT security practices and protocols. The findings from this project will provide information on online students interactions with services and how the interactions contribute to students feelings of mattering to UNM. If published, results will be presented in summary form only. If you have any questions about this research project, please feel free to call Tracy Hart at 505-903-2165. If you have questions regarding your rights as a research subject, or about what you should do in case of any harm to you, you may call the UNM Office of the IRB (OIRB) at (505) 277-2644 or irb.unm.edu.By clicking Start you will be agreeing to participate in the above described research study.

Q10: This is a 3-part survey that should take about 5-20 minutes to complete:Part 1 - identify which services you used and how useful they were.Part 2 - questions related to feelings of mattering to the institution.Part 3 - open ended questions for you to explain your experience with services.Part I. Instructions: Below are comprehensive services for online students offered through online.unm.edu at the University of New Mexico.For each, consider the services provided. Focus on your general impressions with services. There are no right or wrong answers, just answer as honestly as possible. Not all students feel the same way or are expected to feel the same way.1) For each, consider whether or not you used the service. Hover your mouse over the name of the service for more description2) If you used the service, select a response to the statement "The service was useful to me"3) If you did not use the service, select "did not use". 4) You will have the opportunity to provide more detail about your experiences in the third and final section of this survey. Academic Services: Hover your mouse over the name of the service for more description.Please indicate your use of the following Academic Services listed below and select a response to the statement: "These services were useful to me"

These services were useful to me.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Technical Support	○	○	○	○	○	○	○
Academic Advising	○	○	○	○	○	○	○
Academic Counseling	○	○	○	○	○	○	○
Bookstore	○	○	○	○	○	○	○
Retention Services	○	○	○	○	○	○	○
Tutoring	○	○	○	○	○	○	○
Library	○	○	○	○	○	○	○
Disability Services	○	○	○	○	○	○	○

Assessment & Testing	○	○	○	○	○	○	○

Q11: Communication Services: Hover your mouse over the name of the service for more description.Please indicate your use of the following Communication Services listed below and select a response to the statement: "These services were useful to me"

These services were useful to me.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Student-to-Student	○	○	○	○	○	○	○
Faculty-to-Student	○	○	○	○	○	○	○
Institution-to-Student	○	○	○	○	○	○	○

Q12: Administrative Core: Hover your mouse over the name of the service for more description.Please indicate your use of the following Administrative Core Services listed below and select a response to the statement: "These services were useful to me"

These services were useful to me.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Financial Aid	○	○	○	○	○	○	○
Schedule of Classes	○	○	○	○	○	○	○
Course/Program Catalog	○	○	○	○	○	○	○
Admissions	○	○	○	○	○	○	○
Student Accounts	○	○	○	○	○	○	○
Student Records	○	○	○	○	○	○	○
Registration	○	○	○	○	○	○	○

Q13: Student Communities: Hover your mouse over the name of the service for more description.Please indicate your use of the following Student Communities Services listed below and select a response to the statement: "These services were useful to me"

These services were useful to me.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Student Activities	○	○	○	○	○	○	○
Student Population Segments	○	○	○	○	○	○	○

Q14: Personal Services: Hover your mouse over the name of the service for more description.Please indicate your use of the following Personal Services listed below and select a response to the statement: "These services were useful to me"

These services were useful to me.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree	Did Not Use
Financial Planning	○	○	○	○	○	○	○
Placement Services	○	○	○	○	○	○	○
Ethical & Legal Services	○	○	○	○	○	○	○
Orientation	○	○	○	○	○	○	○
Personal Counseling	○	○	○	○	○	○	○
Career Services	○	○	○	○	○	○	○
Wellness Services	○	○	○	○	○	○	○

Q15: Format:Please indicate below which format you typically used the services:(Select all that apply.)

☐ Online ☐ Email ☐ Phone ☐ In person ☐ Chat

Q16: Reasons for NOT using servicesPlease indicate your most common reasons for NOT using:Academic Services: Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment and Testing(Select all that apply).

☐ Did Not Need
☐ Not Accessible When Needed
☐ Not Available for Online Students
☐ Did Not Want
☐ Did Not Know It Was Offered
☐ All Services Were Used

Q17: Part II. Instructions:Below are a series of statements that represent feelings toward SERVICES at the University of New Mexico. When answering: Think about your interactions with SERVICES and indicate the degree to which each statement is in line with your experience. Focus on your general impressions with SERVICES. By service community we mean staff, faculty, students, or administrators who are responsible for various services at UNM. Think of all these people as a whole. There are no right or wrong answers. Just answer as honestly as possible. Not all students feel the same way or are expected to feel the same way.

	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree
1. The people of the UNM service community pay attention to me.	○	○	○	○	○	○
2. My successes are a source of pride to the people of the UNM service community.	○	○	○	○	○	○
3. There are people of the UNM service community who react to what happens to me in the same way they would if it happened to them.	○	○	○	○	○	○
4. When I have a problem, people of the UNM service community usually dont want to hear about it.	○	○	○	○	○	○
5. I know people in the UNM service community are sincerely interested in me.	○	○	○	○	○	○
6. Often, the people of the UNM service community trust me with things that are important to them.	○	○	○	○	○	○

7. There are people at UNM who give me advice when I need it.	○	○	○	○	○	○
8. There are people in the UNM service community who would also experience my disappointment if I didnt reach my full potential.	○	○	○	○	○	○
9. No one in the UNM service community depends on me.	○	○	○	○	○	○
10. The people of the UNM service community are usually aware of my presence.	○	○	○	○	○	○
11. People of the UNM service community are invested in my life.	○	○	○	○	○	○
12. My contributions to UNM benefit the UNM service community.	○	○	○	○	○	○
13. People of the UNM service community care what happens to me.	○	○	○	○	○	○

14. People at UNM would be upset if I were mistreated.	○	○	○	○	○	○
15. If I were not a UNM student, the UNM service community would suffer.	○	○	○	○	○	○

Part III. As a student in online classes at UNM, please use the following 3 text boxes below to describe specific experiences with services through online.unm.edu.

Try to be descriptive as you share your story.

Q18: Describe the WORST experience(s) you've had regarding services as they relate to your experience as a student taking online classes at UNM.

Q19: Describe the BEST experience(s) you've had regarding services as they relate to your experience as a student taking online classes at UNM.

Q20: Describe how you know you matter to people who work at the university.

Q21: We may want to know more. Would you be willing to participate in a phone interview?

◯ Yes ◯ No

Note: if you have NOT answered/chosen item [1] in question 21, skip the following question

Q22: This survey is anonymous. In order for me to contact you, please provide contact information by clicking on the link here.

Appendix B: Mattering Construct Map

This table outlines the four constructs measured with the mattering instrument mapped to the mattering variables. The 4 constructs measured in the mattering instrument are: (A) awareness, (E) ego-extension, (I) importance, and (R) reliance.

Variable	Code	Construct	Notes
UMUM1Attention	A	Awareness	
UMUM2Pride	E	Ego-Extension	
UMUM3React	E	Ego-Extension	
UMUM4Problem	I	Importance	Negatively worded
UMUM5Interest	I	Importance	
UMUM6Trust	R	Reliance	
UMUM7Advice	I	Importance	
UMUM8Potential	E	Ego-Extension	
UMUM9Depend	R	Reliance	Negatively worded
UMUM10Aware	A	Awareness	
UMUM11Invested	I	Importance	
UMUM12Benefit	R	Reliance	
UMUM13Care	I	Importance	
UMUM14Upset	E	Ego-Extension	
UMUM15Suffer	R	Reliance	

Appendix C: Recruitment Email to Student Participants

Recruitment Email

Subject line: Invitation to Participate in a Study

Dear Online Student:

This is your chance to contribute! We want to know about your experience with services as an online student at UNM

If you're ready to participate, please click the link below to begin.

LINK TO SURVEY

Thanks!

Tracy

Appendix D: SPSS Codebook

File Information

Notes

Output Created		27-FEB-2017 16:18:50
Comments		
Input	Data	C:\Users\Tracy Hart\Documents\Dissertation\DEFENSE\Data\Emmons File\Hart - dissdata - 2017-02-18_TH_xform_Hawaii_majors.sav
	Active Dataset	DataSet5
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	186
Syntax		DISPLAY DICTIONARY.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Align-ment	Print Format	Write Format	Missing Values
VAR00001	1	<none>	Scale	Input	8	Right	F8	F8	
RespondentId	2	respondent identifier	Nominal	Input	7	Left	A7	A7	
StartDate	3	date and time when the respondent started answering the survey	Scale	Input	10	Right	DATETIME17	DATETIME17	
CompletedDate	4	date and time when the respondent finished answering the survey	Scale	Input	8	Right	DATETIME17	DATETIME17	
LanguageCode	5	LanguageOfSurvey	Nominal	Input	2	Left	A2	A2	
Major	6	Major	Nominal	Input	34	Left	A34	A34	
College	7	Student College	Nominal	Input	34	Left	A34	A34	
Classification	8	Student Classification	Nominal	Input	26	Left	A26	A26	
Gender	9	Gender	Nominal	Input	6	Left	A6	A6	
Ethnicity	10	Ethnicity	Nominal	Input	22	Left	A22	A22	
Ethnicity_N	11	Ethnicity number	Nominal	Input	13	Right	F8	F8	
Age	12	Current Age (free text)	Nominal	Input	2	Right	F2	F2	

SVC1TechSupport	13	Technical Support	Ordinal	Input	4	Right	F1	F1	
SVC2AcadAdv	14	Academic Advising	Ordinal	Input	4	Right	F1	F1	
SVC3AcadCouns	15	Academic Counseling	Ordinal	Input	4	Right	F1	F1	
SVC4Bookstore	16	Bookstore	Ordinal	Input	4	Right	F1	F1	
SVC5RetSvcs	17	Retention Services	Ordinal	Input	4	Right	F1	F1	
SVCS6Tutoring	18	Tutoring	Ordinal	Input	5	Right	F1	F1	
SVC7ALibrary	19	Library	Ordinal	Input	5	Right	F1	F1	
SVC8Disability	20	Disability Services	Ordinal	Input	4	Right	F1	F1	
SVC9AssessTest	21	Assessment & Testing	Ordinal	Input	4	Right	F1	F1	
SVC10StuStuComm	22	Student-to-Student	Ordinal	Input	5	Right	F1	F1	
SVC11FacStuComm	23	Faculty-to-Student	Ordinal	Input	4	Right	F1	F1	
SVC12InstStuComm	24	Institution-to-Student	Ordinal	Input	5	Right	F1	F1	
SVC13FinAid	25	Financial Aid	Ordinal	Input	4	Right	F1	F1	
SVC14SchedClasses	26	Schedule of Classes	Ordinal	Input	5	Right	F1	F1	
SVC15Catalog	27	Course/Program Catalog	Ordinal	Input	5	Right	F1	F1	

SVC16Adm	28	Admissions	Ordinal	Input	6	Right	F1	F1	
SVC17SAR	29	Student Accounts	Ordinal	Input	5	Right	F1	F1	
SVC18StuRec	30	Student Records	Ordinal	Input	5	Right	F1	F1	
SVC19Reg	31	Registration	Ordinal	Input	5	Right	F1	F1	
SVC20StuActivities	32	Student Activities	Ordinal	Input	5	Right	F1	F1	
SVC21PopSegments	33	Student Population Segments	Ordinal	Input	4	Right	F1	F1	
SVC22FinancialPlanning	34	Financial Planning	Ordinal	Input	4	Right	F1	F1	
SVC23PlacementSvcs	35	Placement Services	Ordinal	Input	4	Right	F1	F1	
SVC24LegalSvcs	36	Ethical & Legal Services	Ordinal	Input	5	Right	F1	F1	
SVC25Orientation	37	Orientation	Ordinal	Input	5	Right	F1	F1	
SVC26PersonalCouns	38	Personal Counseling	Ordinal	Input	4	Right	F1	F1	
SVC27CareerSvcs	39	Career Services	Ordinal	Input	4	Right	F1	F1	
SVC28WellnessSvcs	40	Wellness Services	Ordinal	Input	4	Right	F1	F1	

Q13Online	41	FormatPlease indicate below which format you typically used the services(Select all that apply.)(Online)	Nominal	Input	8	Left	A1	A1	
Q13Email	42	FormatPlease indicate below which format you typically used the services(Select all that apply.)(Email)	Nominal	Input	8	Left	A1	A1	
Q13Phone	43	FormatPlease indicate below which format you typically used the services(Select all that apply.)(Phone_)	Nominal	Input	8	Left	A1	A1	
Q13In_person	44	FormatPlease indicate below which format you typically used the services(Select all that apply.)(In_person)	Nominal	Input	8	Left	A1	A1	
Q13Chat	45	FormatPlease indicate below which format you typically used the services(Select all that apply.)(Chat)	Nominal	Input	8	Left	A1	A1	

Q14Did_Not_Need	46	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	
Q14Did_Not_Want	47	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	

Q14Not_Accessible_When_Needed	48	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	
Q14Did_Not_Know_It_Was_Offered	49	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	

Q14Not_Available_for_Online_Students	50	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	
Q14All_Services_Were_Used	51	Reasons for NOT using servicesPlease indicate your most common reasons for NOT usingAcademic Services Technical Support; Academic Advising; Academic Counseling; Bookstore; Retention Services; Tutoring; Library; Disability; Assessment & Testing(Select all	Nominal	Input	8	Left	A1	A1	
UMUM1Attention	52	Attention.	Ordinal	Input	8	Right	F1	F1	

UMUM2Pride	53	Pride	Ordinal	Input	8	Right	F1	F1	
UMUM3React	54	React	Ordinal	Input	8	Right	F1	F1	
UMUM4Problem	55	Problem	Ordinal	Input	8	Right	F1	F1	
UMUM5Interest	56	Interest	Ordinal	Input	8	Right	F1	F1	
UMUM6Trust	57	Trust	Ordinal	Input	8	Right	F1	F1	
UMUM7Advice	58	Advice	Ordinal	Input	8	Right	F1	F1	
UMUM8Potential	59	Potential	Ordinal	Input	8	Right	F1	F1	
UMUM9Depend	60	Depend	Ordinal	Input	8	Right	F1	F1	
UMUM10Aware	61	Aware	Ordinal	Input	8	Right	F1	F1	
UMUM11Invested	62	Invested	Ordinal	Input	8	Right	F1	F1	
UMUM12Benefit	63	Benefit	Ordinal	Input	8	Right	F1	F1	
UMUM13Care	64	Care	Ordinal	Input	8	Right	F1	F1	
UMUM14Upset	65	Upset	Ordinal	Input	8	Right	F1	F1	
UMUM15Suffer	66	Suffer	Ordinal	Input	8	Right	F1	F1	
UMUM4RProblem	67	Problem reversed	Ordinal	Input	15	Right	F8	F8	

UMUM9RSDepend	68	Depend reversed	Ordinal	Input	15	Right	F8	F8	
Mattering_Mean	69	Mattering mean	Scale	Input	16	Right	F8.2	F8.2	
SVC1TechSupportR	70	SVC1TechSupport not used removed	Nominal	Input	18	Right	F8	F8	0
SVC2AcadAdvR	71	SVC2AcadAdv not used removed	Nominal	Input	14	Right	F8	F8	0
SVC3AcadCounsR	72	SVC3AcadCouns not used removed	Nominal	Input	16	Right	F8	F8	0
SVC4BookstoreR	73	SVC4Bookstore not used removed	Nominal	Input	16	Right	F8	F8	0
SVC5RetSvcsR	74	SVC5RetSvcs not used removed	Nominal	Input	14	Right	F8	F8	0
SVC6TutoringR	75	SVC6Tutoring not used removed	Nominal	Input	15	Right	F8	F8	0
SVC7LibraryR	76	SVC7Library not used removed	Nominal	Input	14	Right	F8	F8	0
SVC8DisabilityR	77	SVC8Disability not used removed	Nominal	Input	17	Right	F8	F8	0
SVC9AssessTestR	78	SVC9AssessTest not used removed	Nominal	Input	17	Right	F8	F8	0
SVC10StuStuCommR	79	SVC10StuStuComm not used removed	Nominal	Input	18	Right	F8	F8	0
SVC11FacStuCommR	80	SVC11FacStuComm not used removed	Nominal	Input	18	Right	F8	F8	0

SVC12InstStuCommR	81	SVC12InstStuComm not used removed	Nominal	Input	19	Right	F8	F8	0
SVC13FinAidR	82	SVC13FinAid not used removed	Nominal	Input	14	Right	F8	F8	0
SVC14SchedClassesR	83	SVC14SchedClasses not used removed	Nominal	Input	20	Right	F8	F8	0
SVC15CatalogR	84	SVC15Catalog not used removed	Nominal	Input	15	Right	F8	F8	0
SVC16AdmR	85	SVC16Adm not used removed	Nominal	Input	11	Right	F8	F8	0
SVC17SARR	86	SVC17SAR not used removed	Nominal	Input	11	Right	F8	F8	0
SVC18StuRecR	87	SVC18StuRec not used removed	Nominal	Input	14	Right	F8	F8	0
SVC19RegR	88	SVC19Reg not used removed	Nominal	Input	11	Right	F8	F8	0
SVC20StuActivitiesR	89	SVC20StuActivities not used removed	Nominal	Input	21	Right	F8	F8	0
SVC21PopSegmentsR	90	SVC21PopSegments not used removed	Nominal	Input	19	Right	F8	F8	0
SVC22FinancialPlanningR	91	SVC22FinancialPlanning not used removed	Nominal	Input	25	Right	F8	F8	0
SVC23PlacementSvcR	92	SVC23PlacementSvcs not used removed	Nominal	Input	20	Right	F8	F8	0
SVC24LegalSvcsR	93	SVC24LegalSvcs not used removed	Nominal	Input	17	Right	F8	F8	0

SVC25OrientationR	94	SVC25Orientation not used removed	Nominal	Input	19	Right	F8	F8	0
SVC26PersonalCounsR	95	SVC26PersonalCouns not used removed	Nominal	Input	21	Right	F8	F8	0
SVC27CareerSvcsR	96	SVC27CareerSvcs not used removed	Nominal	Input	18	Right	F8	F8	0
SVC28WellnessSvcsR	97	SVC28WellnessSvcs not used removed	Nominal	Input	20	Right	F8	F8	0
Gender_N	98	Gender number	Nominal	Input	10	Right	F8.2	F8.2	.00
Major_N	99	Major number	Nominal	Input	8	Right	F8.2	F8.2	.00
College_N	100	college number	Nominal	Input	8	Right	F8.2	F8.2	.00
Class_N	101	class number	Nominal	Input	8	Right	F8.2	F8.2	.00
Major_Num	102	Major	Nominal	Input	11	Right	F2	F2	
College_Num	103	Student College	Nominal	Input	13	Right	F2	F2	
Class_Num	104	Student Classification	Nominal	Input	11	Right	F2	F2	

Variables in the working file

Variable Values

Value		Label
Gender	1	Female
	2	Male
Ethnicity_N	0	Race/Ethnicity Unknown
	0	American Indian
	0	Asian
	0	Black or Afro American
	0	Hispanic
	0	Native Hawaiian
	0	White
	0	Two or More Races
SVC1TechSupport	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC2AcadAdv	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC3AcadCouns	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC4Bookstore	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly

	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC5RetSvcs	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVCS6Tutoring	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC7ALibrary	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC8Disability	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC9AssessTest	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree

	7	Did Not Use
SVC10StuStuComm	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC11FacStuComm	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC12InstStuComm	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC13FinAid	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC14SchedClasses	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC15Catalog	1	Strongly Disagree

	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC16Adm	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC17SAR	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC18StuRec	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC19Reg	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC20StuActivities	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly

	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC21PopSegments	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC22FinancialPlanning	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC23PlacementSvcs	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC24LegalSvcs	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC25Orientation	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree

	6	Strongly Agree
	7	Did Not Use
SVC26PersonalCouns	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC27CareerSvcs	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
SVC28WellnessSvcs	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
	7	Did Not Use
Q13Online	0	not selected
	1	selected
Q13Email	0	not selected
	1	selected
Q13Phone	0	not selected
	1	selected
Q13In_person	0	not selected
	1	selected
Q13Chat	0	not selected
	1	selected
Q14Did_Not_Need	0	not selected
	1	selected
Q14Did_Not_Want	0	not selected
	1	selected

Q14Not_Accessible_When_Needed	0	not selected
	1	selected
Q14Did_Not_Know_It_Was_Offered	0	not selected
	1	selected
Q14Not_Available_for_Online_Students	0	not selected
	1	selected
Q14All_Services_Were_Used	0	not selected
	1	selected
UMUM1Attention	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM2Pride	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM3React	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM4Problem	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM5Interest	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree

	6	Strongly Agree
UMUM6Trust	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM7Advice	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM8Potential	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM9Depend	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM10Aware	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM11Invested	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree

UMUM12Benefit	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM13Care	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM14Upset	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM15Suffer	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM4RProblem	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
UMUM9RSDepend	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC1TechSupportR	0[a]	Did Not Use

	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC2AcadAdvR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC3AcadCounsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC4BookstoreR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC5RetSvcsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC6TutoringR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree

	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC7LibraryR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC8DisabilityR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC9AssessTestR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC10StuStuCommR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC11FacStuCommR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly

	5	Agree
	6	Strongly Agree
SVC12InstStuCommR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC13FinAidR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC14SchedClassesR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC15CatalogR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC16AdmR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree

SVC17SARR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC18StuRecR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC19RegR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC20StuActivitiesR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC21PopSegmentsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC22FinancialPlanningR	0[a]	Did Not Use
	1	Strongly Disagree

	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC23PlacementSvcR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC24LegalSvcsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC25OrientationR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC26PersonalCounsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC27CareerSvcsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly

	4	Agree Slightly
	5	Agree
	6	Strongly Agree
SVC28WellnessSvcsR	0[a]	Did Not Use
	1	Strongly Disagree
	2	Disagree
	3	Disagree Slightly
	4	Agree Slightly
	5	Agree
	6	Strongly Agree
Major_Num	1	Accounting
	2	Anthropology
	3	Athletic Training
	4	Biochemistry
	5	Biology
	6	Business Administration
	7	Chemical Engineering
	8	Communication
	9	Criminology
	10	Dental Hygiene
	11	Early Childhood Multicult Ed
	12	Economics
	13	Educational Leadership
	14	Electrical Engineering
	15	Elementary Education
	16	English Studies
	17	General Engineering
	18	Geography
	19	Health Administration
	20	History
	21	Integrative Studies
	22	Latin American Studies
	23	Liberal Arts
	24	Mechanical Engineering
	25	Nanoscience & Microsystems

	26	Non-Degree
	27	Nursing
	28	Nursing Practice
	29	Nutrition/Dietetics
	30	Org Learn & Instructional Tech
	31	Organiza Info & Learning Sci
	32	Political Science
	33	Psychology
	34	Public Administration
	35	Radiologic Sciences
	36	Religious Studies
	37	Secondary Education
	38	Sociology
	39	Spanish
	40	Speech & Hearing Sciences
	41	Technology & Training
	42	Undecided
College_Num	1	Anderson Schools of Management
	2	College of Arts and Sciences
	3	College of Education
	4	College of Nursing
	5	Graduate Programs
	6	Non-Degree Status
	7	School of Engineering
	8	Univ Libraries & Learn Science
	9	University College
	10	University Libraries
	11	University Studies
Class_Num	1	Freshman 1st Yr 1st Sem
	2	Graduate Certificate Prog.
	3	Graduate Doctoral

	4	Graduate First Masters
	5	Graduate Second Masters
	6	Junior 3rd Yr
	7	Non Degree Graduate
	8	Nursing Lvl IV
	9	Senior 4th Yr
	10	Sophomore 2nd Yr

a. Missing value

Appendix E: Services-to-Services Correlations

Correlations

Spearman's rho

		Technical Support	Academic Advising	Academic Counseling	Bookstore	Retention Services	Tutoring	Library	Disability Services	Assessment & Testing	Student-to-Student	Faculty-to-Student	Institution-to-Student	Financial Aid	Schedule of Classes	Course/Program Catalog	Admissions	Student Accounts	Student Records	Registration	Student Activities	Student Population Segments	Financial Planning	Placement Services	Ethical & Legal Services	Orientation	Personal Counseling	Career Services	Wellness Services
Technical Support	Correlation Coefficient	1	.480**	.492**	.461**	.618**	.499**	.322**	.516**	.583**	.218	.199	.360**	.345**	.222*	.322**	.353**	.261*	.260*	.378**	.389*	.214	.654**	.438*	.751**	.460**	.568**	.239	.534**
	Sig. (2-tailed)		0	0	0	0	0.001	0.003	0.002	0	0.064	0.051	0.001	0.004	0.035	0.002	0.002	0.016	0.016	0	0.017	0.314	0	0.028	0	0.001	0.002	0.212	0.002
	N	105	92	61	75	33	39	81	32	50	73	96	86	69	90	87	78	85	85	90	37	24	31	25	19	46	26	29	30
Academic Advising	Correlation Coefficient	.480**	1	.946**	.425**	.847**	.557**	.357**	.645**	.650**	.370**	.364**	.554**	.242*	.257**	.377**	.467**	.350**	.345**	.429**	.380*	0.335	.549**	.783**	.899**	.754**	.673**	.602**	.424*
	Sig. (2-tailed)	0		0	0	0	0	0	0	0	0	0	0	0.018	0.004	0	0	0	0	0	0.017	0.087	0	0	0	0	0	0	0.01
	N	92	135	80	101	34	46	100	34	68	94	123	107	96	122	118	97	115	111	121	39	27	38	31	20	63	32	33	36
Academic Counseling	Correlation Coefficient	.492**	.946**	1	.442**	.836**	.651**	.425**	.659**	.690**	.329**	.253*	.683**	.299*	.257*	0.228	.571**	.332**	.339**	.508**	.383*	0.41	.638**	.849**	.904**	.832**	.719**	.734**	.448*
	Sig. (2-tailed)	0	0		0	0	0	0.001	0	0	0.008	0.026	0	0.022	0.028	0.054	0	0.004	0.004	0	0.049	0.058	0	0	0	0	0	0	0.019
	N	61	80	83	67	34	36	61	32	54	63	78	73	58	73	72	62	74	70	73	27	22	29	23	19	40	28	24	27
Bookstore	Correlation Coefficient	.461**	.425**	.442**	1	.708**	.373*	.379**	.621**	.647**	.351**	.355**	.440**	.272*	.359**	.416**	.573**	.530**	.459**	.402**	0.283	0.32	.612**	.708**	.879**	.521**	.670**	.580**	.532**
	Sig. (2-tailed)	0	0	0		0	0.012	0	0	0	0.002	0	0	0.014	0	0	0	0	0	0	0.094	0.137	0	0	0	0	0	0.001	0.002
	N	75	101	67	117	34	45	90	32	60	79	107	86	82	104	101	87	95	94	101	36	23	30	30	18	54	29	31	30
Retention Services	Correlation Coefficient	.618**	.847**	.836**	.708**	1	.811**	.580**	.877**	.867**	.790**	0.315	.782**	0.298	0.046	0.141	.523**	0.126	0.083	0.317	.546*	.548*	.591**	.831**	.912**	.921**	.875**	.868**	0.472
	Sig. (2-tailed)	0	0	0	0		0	0.001	0	0	0	0.079	0	0.148	0.821	0.483	0.005	0.522	0.679	0.1	0.023	0.028	0.008	0	0	0	0	0	0.065
	N	33	34	34	34	35	28	31	28	33	28	32	30	25	27	27	27	28	27	28	17	16	19	17	17	19	17	16	16
Tutoring	Correlation Coefficient	.499**	.557**	.651**	.373*	.811**	1	.364*	.762**	.684**	.447**	0.218	.516**	0.14	0.107	0.13	0.306	-0.139	-0.108	0.094	0.396	0.332	0.404	.527*	.761**	.680**	.535*	.625**	.470*
	Sig. (2-tailed)	0.001	0	0	0.012	0		0.018	0	0	0.005	0.171	0.001	0.424	0.523	0.442	0.073	0.405	0.52	0.576	0.061	0.165	0.069	0.017	0	0	0.013	0.003	0.024
	N	39	46	36	45	28	47	42	27	36	38	41	37	35	38	37	35	38	38	38	23	19	21	20	17	22	21	20	23
Library	Correlation Coefficient	.322**	.357**	.425**	.379**	.580**	.364*	1	.459**	.539**	.328**	.327**	.393**	0.177	.286**	.218*	.342**	.285**	.338**	.343**	0.065	-0.027	0.261	0.284	.508*	.316*	.621**	.545**	.670**
	Sig. (2-tailed)	0.003	0	0.001	0	0.001	0.018		0.006	0	0.002	0	0	0.093	0.002	0.023	0.001	0.003	0.001	0	0.716	0.904	0.155	0.16	0.037	0.021	0.001	0.002	0
	N	81	100	61	90	31	42	126	34	60	87	115	98	91	113	109	89	107	101	108	34	22	31	26	17	53	27	31	34
Disability Services	Correlation Coefficient	.516**	.645**	.659**	.621**	.877**	.762**	.459**	1	.860**	.546**	0.206	.381*	0.183	0.14	0.124	.398*	0.184	0.155	0.313	0.288	0.382	.608**	.781**	.841**	.574**	.683**	.706**	0.381
	Sig. (2-tailed)	0.002	0	0	0	0	0	0.006		0	0.002	0.243	0.034	0.342	0.462	0.521	0.036	0.331	0.432	0.092	0.28	0.159	0.01	0.001	0	0.008	0.003	0.005	0.132
	N	32	34	32	32	28	27	34	37	31	29	34	31	29	30	29	28	30	28	30	16	15	17	15	14	20	17	14	17
Assessment & Testing	Correlation Coefficient	.583**	.650**	.690**	.647**	.867**	.684**	.539**	.860**	1	.480**	.239*	.580**	.295*	.267*	.385**	.597**	.438**	.397**	.463**	0.244	0.269	.556**	.694**	.783**	.722**	.741**	.537**	.507*
	Sig. (2-tailed)	0	0	0	0	0	0	0	0		0	0.045	0	0.03	0.028	0.001	0	0	0.001	0	0.229	0.239	0.002	0	0	0	0	0.003	0.013
	N	50	68	54	60	33	36	60	31	75	58	71	59	54	68	67	58	64	63	67	26	21	29	27	19	39	28	28	23
Student-to-Student	Correlation Coefficient	0.218	.370**	.329**	.351**	.790**	.447**	.328**	.546**	.480**	1	.409**	.433**	0.206	.190*	.330**	.403**	.321**	.302**	.297**	.540**	.443*	.497**	.601**	.803**	.515**	.443*	.461**	.554**
	Sig. (2-tailed)	0.064	0	0.008	0.002	0	0.005	0.002	0.002	0		0	0	0.061	0.044	0	0	0.001	0.002	0.001	0	0.021	0.002	0	0	0	0.013	0.008	0.001
	N	73	94	63	79	28	38	87	29	58	122	120	99	83	113	109	84	107	103	112	40	27	36	32	21	49	31	32	35
Faculty-to-Student	Correlation Coefficient	0.199	.364**	.253*	.355**	0.315	0.218	.327**	0.206	.239*	.409**	1	.423**	0.126	.169*	.257**	.324**	.334**	.367**	.342**	.431**	.444*	.522**	.583**	.766**	.341**	.652**	.467**	.571**
	Sig. (2-tailed)	0.051	0	0.026	0	0.079	0.171	0	0.243	0.045	0		0	0.193	0.037	0.002	0	0	0	0	0.004	0.018	0	0	0	0.004	0	0.003	0
	N	96	123	78	107	32	41	115	34	71	120	166	131	109	153	147	116	139	135	149	43	28	41	33	21	68	36	38	40
Institution-to-Student	Correlation Coefficient	.360**	.554**	.683**	.440**	.782**	.516**	.393**	.381*	.580**	.433**	.423**	1	.461**	.313**	.283**	.496**	.385**	.351**	.502**	.542**	.580**	.521**	.691**	.811**	.582**	.597**	.583**	.377*
	Sig. (2-tailed)	0.001	0	0	0	0	0.001	0	0.034	0	0	0		0	0	0.002	0	0	0	0	0.002	0.001	0	0	0	0	0	0	0.028
	N	86	107	73	86	30	37	98	31	59	99	131	133	91	125	121	96	120	114	123	39	26	36	29	20	59	34	33	34
Financial Aid	Correlation Coefficient	.345**	.242*	.299*	.272*	0.298	0.14	0.177	0.183	.295*	0.206	0.126	.461**	1	.528**	.473**	.560**	.445**	.509**	.455**	0.142	0.252	.506**	0.266	0.276	0.188	0.07	0.247	0.032
	Sig. (2-tailed)	0.004	0.018	0.022	0.014	0.148	0.424	0.093	0.342	0.03	0.061	0.193	0		0	0	0	0	0	0	0.402	0.214	0.002	0.155	0.268	0.15	0.71	0.165	0.861
	N	69	96	58	82	25	35	91	29	54	83	109	91	116	113	108	93	105	101	109	37	26	36	30	18	60	31	33	33
Schedule of Classes	Correlation Coefficient	.222*	.257**	.257*	.359**	0.046	0.107	.286**	0.14	.267*	.190*	.169*	.313**	.528**	1	.678**	.498**	.478**	.536**	.607**	0.121	0.16	0.238	0.254	0.167	0.132	0.154	0.296	0.226
	Sig. (2-tailed)	0.035	0.004	0.028	0	0.821	0.523	0.002	0.462	0.028	0.044	0.037	0	0		0	0	0	0	0	0.446	0.415	0.134	0.154	0.482	0.281	0.377	0.075	0.173
	N	90	122	73	104	27	38	113	30	68	113	153	125	113	162	154	120	146	139	155	42	28	41	33	20	69	35	37	38
Course/Program Catalog	Correlation Coefficient	.322**	.377**	0.228	.416**	0.141	0.13	.218*	0.124	.385**	.330**	.257**	.283**	.473**	.678**	1	.599**	.593**	.613**	.510**	0.157	0.184	0.229	0.245	0.064	.328**	0.169	0.203	0.08
	Sig. (2-tailed)	0.002	0	0.054	0	0.483	0.442	0.023	0.521	0.001	0	0.002	0.002	0	0		0	0	0	0	0.322	0.359	0.156	0.17	0.783	0.006	0.331	0.243	0.642
	N	87	118	72	101	27	37	109	29	67	109	147	121	108	154	155	119	141	136	150	42	27	40	33	21	69	35	35	36
Admissions	Correlation Coefficient	.353**	.467**	.571**	.573**	.523**	0.306	.342**	.398*	.597**	.403**	.324**	.496**	.560**	.498**	.599**	1	.776**	.743**	.664**	.438**	.499**	.473**	.645**	.629**	.585**	.538**	.592**	.389*
	Sig. (2-tailed)	0.002	0	0	0	0.005	0.073	0.001	0.036	0	0	0	0	0	0	0		0	0	0	0.005	0.008	0.003	0	0.002	0	0.001	0	0.019
	N	78	97	62	87	27	35	89	28	58	84	116	96	93	120	119	123	116	111	120	40	27	38	33	21	67	34	37	36
Student Accounts	Correlation Coefficient	.261*	.350**	.332**	.530**	0.126	-0.139	.285**	0.184	.438**	.321**	.334**	.385**	.445**	.478**	.593**	.776**	1	.905**	.705**	0.235	0.194	.376*	.358*	0.216	.429**	.339*	.398*	0.255
	Sig. (2-tailed)	0.016	0	0.004	0	0.522	0.405	0.003	0.331	0	0.001	0	0	0	0	0	0		0	0	0.139	0.323	0.017	0.041	0.348	0	0.043	0.016	0.117
	N	85	115	74	95	28	38	107	30	64	107	139	120	105	146	141	116	149	136	145	41	28	40	33	21	66	36	36	39
Student Records	Correlation Coefficient	.260*	.345**	.339**	.459**	0.083	-0.108	.338**	0.155	.397**	.302**	.367**	.351**	.509**	.536**	.613**	.743**	.905**	1	.740**	0.234	0.115	.347*	.356*	0.191	.365**	0.235	0.221	0.131
	Sig. (2-tailed)	0.016	0	0.004	0	0.679	0.52	0.001	0.432	0.001	0.002	0	0	0	0	0	0	0		0	0.131	0.568	0.031	0.042	0.406	0.003	0.181	0.195	0.453
	N	85	111	70	94	27	38	101	28	63	103	135	114	101	139	136	111	136	143	142	43	27	39	33	21	65	34	36	35
Registration	Correlation Coefficient	.378**	.429**	.508**	.402**	0.317	0.094	.343**	0.313	.463**	.297**	.342**	.502**	.455**	.607**	.510**	.664**	.705**	.740**	1	0.099	0.113	.384*	.488**	.452*	.432**	0.321	.411*	0.275
	Sig. (2-tailed)	0	0	0	0	0.1	0.576	0	0.092	0	0.001	0	0	0	0	0	0	0	0		0.53	0.566	0.013	0.004	0.04	0	0.06	0.012	0.095
	N	90	121	73	101	28	38	108	30	67	112	149	123	109	155	150	120	145	142	159	43	28	41	33	21	70	35	37	38
Student Activities	Correlation Coefficient	.389*	.380*	383*	0.283	.546*	0.396	0.065	0.288	0.244	.540**	.431**	.542**	0.142	0.121	0.157	.438**	0.235	0.234	0.099	1	.974**	.574**	.500**	.539*	.569**	.432*	.424*	0.315
	Sig. (2-tailed)	0.017	0.017	0.049	0.094	0.023	0.061	0.716	0.28	0.229	0	0.004	0	0.402	0.446	0.322	0.005	0.139	0.131	0.53		0	0.001	0.008	0.017	0.001	0.035	0.024	0.102
	N	37	39	27	36	17	23	34	16	26	40	43	39	37	42	42	40	41	43	43	27	28	27	19	30	24	28	28	
Student Population Segments	Correlation Coefficient	0.214	0.335	0.41	0.32	.548*	0.332	-0.027	0.382	0.269	.443*	.444*	.580**	0.252	0.16	0.184	.499**	0.194	0.115	0.113	.974**	1	.505*	0.399	.540*	.522*	0.394	0.388	0.378
	Sig. (2-tailed)	0.314	0.087	0.058	0.137	0.028	0.165	0.904	0.159	0.239	0.021	0.018	0.002	0.214	0.415	0.359	0.008	0.323	0.568	0.566	0		0.012	0.06	0.021	0.011	0.086	0.074	0.075
	N	24	27	22	23	16	19	22	15	21	27	28	26	26	28	27	27	28	27	28	27	28	24	23	18	23	20	22	23
Financial Planning	Correlation Coefficient	.654**	.549**	.638**	.612**	.591**	0.404	0.261	.608**	.556**	.497**	.522**	.521**	.506**	0.238	0.229	.473**	.376*	.347*	.384*	.574**	.505*	1	.822**	.824**	.720**	.849**	.758**	.777**
	Sig. (2-tailed)	0	0	0	0	0.008	0.069	0.155	0.01	0.002	0.002	0	0.001	0.002	0.134	0.156	0.003	0.017	0.031	0.013	0.001	0.012		0	0	0	0	0	0
	N	31	38	29	30	19	21	31	17	29	36	41	36	36	41	40	38	40	39	41	28	24	41	27	18	29	22	25	24
Placement Services	Correlation Coefficient	.438*	.783**	.849**	.708**	.831**	.527*	0.284	.781**	.694**	.601**	.583**	.691**	0.266	0.254	0.245	.645**	.358*	.356*	.488**	.500**	0.399	.822**	1	.978**	.899**	.884**	.890**	.597**
	Sig. (2-tailed)	0.028	0	0	0	0	0.017	0.16	0.001	0	0	0	0	0.155	0.154	0.17	0	0.041	0.042	0.004	0.008	0.06	0		0	0	0	0	0.003
	N	25	31	23	30	17	20	26	15	27	32	33	29	30	33	33	33	33	33	33	27	23	27	33	19	27	24	24	23
Ethical & Legal Services	Correlation Coefficient	.751**	.899**	.904**	.879**	.912**	.761**	.508*	.841**	.783**	.803**	.766**	.811**	0.276	0.167	0.064	.629**	0.216	0.191	.452*	.539*	.540*	.824**	.978**	1	.968**	.982**	.959**	.597**
	Sig. (2-tailed)	0	0	0	0	0	0	0.037	0	0	0	0	0	0.268	0.482	0.783	0.002	0.348	0.406	0.04	0.017	0.021	0	0		0	0	0	0.007
	N	19	20	19	18	17	17	17	14	19	21	21	20	18	20	21	21	21	21	21	19	18	18	19	21	18	20	18	19
Orientation	Correlation Coefficient	.460**	.754**	.832**	.521**	.921**	.680**	.316*	.574**	.722**	.515**	.341**	.582**	0.188	0.132	.328**	.585**	.429**	.365**	.432**	.569**	.522*	.720**	.899**	.968**		1	.553**	.519**	.381*
	Sig. (2-tailed)	0.001	0	0	0	0	0	0.021	0.008	0	0	0.004	0	0.15	0.281	0.006	0	0	0.003	0	0.001	0.011	0	0		0		0.002	0.002	0.038
	N	46	63	40	54	19	22	53	20	39	49	68	59	60	69	69	67	66	65	70	30	23	29	27	18	70	29	32	30
Personal Counseling	Correlation Coefficient	.568**	.673**	.719**	.670**	.875**	.535*	.621**	.683**	.741**	.443*	.652**	.597**	0.07	0.154	0.169	.538**	.339*	0.235	0.321	.432*	0.394	.849**	.884**	.982**	.553**		1	.957**	.668**
	Sig. (2-tailed)	0.002	0	0	0	0	0.013	0.001	0.003	0	0.013	0	0	0.71	0.377	0.331	0.001	0.043	0.181	0.06	0.035	0.086	0	0	0	0.002		0	0.001
	N	26	32	28	29	17	21	27	17	28	31	36	34	31	35	35	34	36	34	35	24	20	22	24	20	29	36	21	23
Career Services	Correlation Coefficient	0.239	.602**	.734**	.580**	.868**	.625**	.545**	.706**	.537**	.461**	.467**	.583**	0.247	0.296	0.203	.592**	.398*	0.221	.411*	.424*	0.388	.758**	.890**	.959**	.519**	.957**	1	.627**
	Sig. (2-tailed)	0.212	0	0	0.001	0	0.003	0.002	0.005	0.003	0.008	0.003	0	0.165	0.075	0.243	0	0.016	0.195	0.012	0.024	0.074	0	0	0	0.002	0		0.001
	N	29	33	24	31	16	20	31	14	28	32	38	33	33	37	35	37	36	36	37	28	22	25	24	18	32	21	38	26
Wellness Services	Correlation Coefficient	.534**	.424*	.448*	.532**	0.472	.470*	.670**	0.381	.507*	.554**	.571**	.377*	0.032	0.226	0.08	.389*	0.255	0.131	0.275	0.315	0.378	.777**	.597**	.597**	.381*	.668**	.627**	1
	Sig. (2-tailed)	0.002	0.01	0.019	0.002	0.065	0.024	0	0.132	0.013	0.001	0	0.028	0.861	0.173	0.642	0.019	0.117	0.453	0.095	0.102	0.075	0	0.003	0.007	0.038	0.001	0.001	
	N	30	36	27	30	16	23	34	17	23	35	40	34	33	38	36	36	39	35	38	28	23	24	23	19	30	23	26	40

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Very Strong | Strong | Moderate